



**Math 351.71W TOPICS IN MATH FOR ELEM. TEACHERS II
COURSE SYLLABUS: SUMMER II 2014**

Instructor: Dr. Shari Beck

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COURSE INFORMATION

Materials – Textbooks, Readings, Supplementary Readings:

Textbook is Optional: A Problem Solving Approach to Mathematics for Elementary Teachers in the 11th edition by Billstein, Libeskind, and Lott.

You will be required to have an access code for MyMathLab. The course ID needed to register in the MyMathLab program is **beck74818.**

Graphing paper

Calculators: The statistics portion of this course will integrate the use of a graphing calculator. Class demonstrations and instructions will be given based on a TI-83 or TI-84 calculator. If you choose to use another type (such as Casio), it is your responsibility to learn how to use it for statistics.

Course Description:

This course is designed for education majors. Topics in this course include: ratio and proportion, percents, statistics, probability, geometry and measurement. Students should already have substantial skills in these areas. Problem solving undergirds all of these topics. The course focuses on underlying concepts and multiple techniques of explaining the concepts. Prerequisite Math 350.

This course is designed for elementary education majors and students seeking certification to teach grades K-8.

Student Learning Outcomes:

The learner will be able to:

1. List outcomes of a probability experiment and compute probabilities for events.
2. Interpret and construct statistical graphs.
3. Calculate measures of central tendency and measures of variability for a given data set.
4. Identify the correct geometric formula to calculate two and three-dimensional measurements of various figures and solids.
5. Use transformational geometry.
6. Use appropriate technology to enhance mathematical thinking and understanding and to solve mathematical problems and judge the reasonableness of the results.

COURSE REQUIREMENTS

Instructional / Methods / Activities Assessments

This course is made up of a series of assignments and assessments to assist you in achieving the course and module learning objectives/outcomes. Each week you will work on various combinations of assignments, activities, readings, and reflective thinking. All homework/investigations will be due by Sunday night as listed in the detailed schedule.

Grading

Your course grade will be computed as follows:

Homework/Investigations (25% of total course grade): Course Outcomes/Objectives 1-6
During each regular week of the course, you will have a reading assignment combined with videos/PowerPoint presentations to watch. On the weekly course sheet, you will have assigned problems on MyMathLab and/or investigations. For each homework set, you need to complete the reading and viewing first. Then, complete the homework assignment. All homework will be due by 11:59 PM on the date specific in the calendar at the end of the syllabus. The MyMathLab homework will be submitted online. For the investigations, you need to upload the assignment to the dropbox on ecollege. **NO LATE WORK WILL BE ACCEPTED!** Early work is always accepted.

Project (15% of total course grade): Course Outcome/Objective 6

For the course project, you will need to choose 12 vocabulary terms (4 from each unit-Geometry, Probability, and Statistics) from the units that we have covered. With a digital camera, I want you to **take a picture** of your term in the real world and use it as part of a PowerPoint slide to illustrate your term to a mathematics class at the grade level you hope to teach. You will upload your final project to the dropbox on ecollege or email me your PowerPoint presentation to shari.beck@navarrocollege.edu. Samples are shown on a project sheet and a sample project listed under Doc Sharing on the eCollege website. **NO LATE PROJECTS WILL BE ACCEPTED!** Early work is always accepted. Projects are due by Friday, August 1, 2014.

Midterm Exam (30% of total course grade): Course Outcome/Objectives 4-5

This exam will cover all material within the geometry unit. This exam will cover course readings, lectures, PowerPoints, investigations, and homework assignments. Students must complete the exam independently in a proctored environment. Any form of academic dishonesty will result in an F in the course.

Your exams will be administered in a face-to-face environment. The date and time are listed below. **If you cannot make this time and do not have an alternate testing location that has been approved by me, you will need to drop this course. The exam will not be given on the Commerce campus.**

On Tuesday, July 22, you will take the midterm exam from 10:00 AM – 12:00 PM. The exam will be on the Corsicana campus of TAMU-Commerce. The room will be posted on a sign on the door of the building on the day of the exam and on my office door.

You will need to bring a photo ID for the testing. Please be on time so that you have the full time for the test. Tests will be taken up at 12:00 PM regardless of what time you arrive.

If this date or time does not fit your schedule, then your only other option is to pay to take the exam at a local junior college or university testing center. You will need to notify me during **THE FIRST WEEK OF CLASSES** with the name of the testing center and an email address for a contact person in order to get the testing center approved by me. If I do not hear from you regarding an alternate testing location by Friday, July 11, then I will assume you are testing with me in Corsicana on July 22, from 10:00 AM – 12:00 PM. **The exam will not be given in Commerce and Commerce does not have a testing center for you to use.**

Final Exam (30% of total course grade): Course Outcome/Objectives 1-6

This exam will cover all material from the entire semester. This exam will cover course readings, lectures, PowerPoints, investigations, and homework assignments. Students must complete the exam independently in a proctored environment. Any form of academic dishonesty will result in an F in the course.

Your exams will be administered in a face-to-face environment. The date and time are listed below. **If you cannot make this time and do not have an alternate testing location that has been approved by me, you will need to drop this course. The exam will not be given on the Commerce campus.**

On Wednesday, August 6, you will take the final exam from 10:00 AM - 12:00 PM. The exam will be on the Corsicana campus of TAMU-Commerce. The room will be posted on a sign on the door of the building on the day of the exam and on my office door.

You will need to bring a photo ID for the testing. Please be on time so that you have the full time for the test. Tests will be taken up at 12:00 PM regardless of what time you arrive.

If this date or time does not fit your schedule, then your only other option is to pay to take the exam at a local junior college or university testing center. You will need to notify me during **THE FIRST WEEK OF CLASSES** with the name of the testing center and an email address for a contact person in order to get the testing center approved by me. If I do not hear from you regarding an alternate testing location by Friday, July 11, then I will assume you are testing with

me in Corsicana on August 6 from 10:00 AM - 12:00 PM. **The exam will not be given in Commerce and Commerce does not have a testing center for you to use.**

Make-up Exams. If the student misses an exam for an **excused** absence, it is the student's responsibility to contact the instructor before the scheduled test time in order to schedule a make-up exam.

Grading Criteria

<u>Numerical Average</u>	<u>Letter Grade</u>
90 – 100	A
80 – 89	B
70 – 79	C
60 – 69	D
0 – 59	F

TECHNOLOGY REQUIREMENTS

This is an internet course with proctored exams. This course will be a combination of video lectures, PowerPoint presentations, and online investigations. The following technology is recommended to be successful in your online course.

- ❖ Internet connection – high speed recommended (not dial-up)
- ❖ Word Processor, PowerPoint
- ❖ Access to a scanner/fax machine
- ❖ Access to a digital camera

Additionally, the following hardware and software are necessary to use eCollege:

Our campus is optimized to work in a Microsoft Windows environment. This means our courses work best if you are using a Windows operating system (XP or newer) and a recent version of Microsoft Internet Explorer (6.0, 7.0, or 8.0).

Your courses will also work with Macintosh OS X along with a recent version of Safari 2.0 or better. Along with Internet Explorer and Safari, eCollege also supports the Firefox browser (3.0) on both Windows and Mac operating systems.

It is strongly recommended that you perform a “Browser Test” prior to the start of your course. To launch a browser test, login in to eCollege, click on the ‘myCourses’ tab, and then select the “Browser Test” link under Support Services.

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. Conversely, you are to email me via the eCollege email system or your myLeo email as our spam filters will catch yahoo, hotmail, etc.

ACCESS AND NAVIGATION

This course was developed and will be facilitated utilizing eCollege, the Learning Management System used by Texas A&M University-Commerce. To get started with the course, go to:

<https://leo.tamu-commerce.edu/login.aspx>

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 or helpdesk@tamu-commerce.

Being a Successful Online Student

- [What Makes a Successful Online Student?](#)

- [Self-Evaluation for Potential Online Students](#)

- [Readiness for Education at a Distance Indicator \(READI\)](#)

o *Login Information*: Login = **tamuc**; password = **online**

How is the Course Organized?

This course is organized into weekly assignments and homework. A detailed weekly schedule is given at the end of this document.

What Should Students Do First?

Students should carefully read through the entire syllabus first and email the instructor with any questions. Then, the student should login to eCollege and click on the link for Week 1 located on the left side of the screen. Assignment will be listed by each week and homework problems will be posted at the end of this document and under the assignment link for each week.

How Should Students Proceed Each Week for Class Activities?

1. The student will follow the detailed weekly schedule located at the end of this document. These assignments are also listed under each weekly link on the eCollege site for the course.
2. The student will watch all videos and PowerPoint Presentations first. Video files are all located under the Doc Sharing tab on eCollege. PowerPoint Presentations are listed as links for each week.
3. The student will complete the assigned homework/investigations for each week and submit their work to the instructor by 11:59 PM (via email, fax, or regular mail-see specifics in the detailed homework section) on the Sunday of the week the assignment is made.
4. The student will complete a course project in accordance with the instructions given in this syllabus and on eCollege.
5. The student will complete a Midterm and a Final Exam on specified dates and submit to the instructor by 11:59 PM (via email, fax, or regular mail).

COMMUNICATION AND SUPPORT

Interaction with Instructor Statement:

Class announcements will be made through broadcast emails sent to the entire class on eCollege. Personalized communication will be made through email with the instructor or by calling the instructor during specified office hours. Students may also seek tutoring from the instructor during specified office hours. Email responses will be made within 24 hours Monday – Friday.

COURSE AND UNIVERSITY PROCEDURES/POLICIES
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Course Specific Procedures:

Student 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.

Chat Support: Click on *'Live Support'* on the tool bar within your course to chat with an eCollege Representative.

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 (i.e. How to submit to dropbox, How to post to discussions etc...)

Tutorials

Peer tutoring is encouraged or you may see the instructor during office hours if you need additional assistance.

Academic Dishonesty

Academic dishonesty in any form will not be tolerated. Any form of academic dishonesty will result in immediate removal from this course with an F.

University Specific Procedures:

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@tamuc.edu

[Student Disability Resources & Services](#)

Student Conduct

All students enrolled at the University shall follow the tenets of common decency and acceptable behavior conducive to a positive learning environment. (See *Code of Student Conduct from Student Guide Handbook*).

COURSE OUTLINE / CALENDAR

Content

This course will cover Standards III, IV, V, VI, VII, VIII, and IX of the EC-6 Mathematics Generalist standards as specified for the Texas State Board for Educator Certification.

Content Outline

The course will cover chapters 7-11.

Course Outline:

MML: indicates that the homework assignment is located in MyMathLab

MA: indicates that this is a Media assignment and it is located in MyMathLab

OI: indicates that this is an online investigation and the worksheets with instructions are located Blackboard

All Reading assignments are from the text.

All PowerPoint Presentations and Videos that are listed are located on Blackboard under the Assignments tab.

Module 1
(7/7)

Introductions on the Discussion Board
Read Chapter 13: Section 1 and Section 2
PowerPoint Presentation on Transformations
PowerPoint Presentation on Transformations in the Coordinate Plane
Translations Part I Video
Translations Part II Video
Reflections Part I Video
Reflections Part II Video
Rotation Video

Assignments due by 7/9: Orientation (MML)
 Transformations (MA)
 Homework 13.1-13.2 (MML)

Module 2
(7/10)

Read Chapter 13: Section 4
PowerPoint on Symmetry

Assignments due by 7/11: Symmetry (MA)
 Tessellation (MA)
 Homework 13.4 (MML)

Module 3
(7/14)

Read Chapter 11: Sections 1, Section 2, and Section 3
Introduction to Euclidean Geometry Video
PowerPoint Presentation on Points, Lines, and Planes
Interior Angle Formula Video
Exterior Angles Video

PowerPoint Presentation on Angles and Triangles
Angles Part I Video
Angles Part II Video

Assignments due by 7/15: Homework 11.1-11.3 (MML)

Module 4
(7/16)

Read Chapter 11: Section 4
Read Chapter 14: Section 1
PowerPoint on Similar Figures/Solids
Naming Parts of a Picture Video
Nets and Solids Video
Perimeter Video
Area Video

Assignments due by 7/17: An Investigation of Nets and Solids
worksheets (OI)
Homework 11.4 (MML)
Perimeter and Area (MA)
Homework 14.1 (MML)

Module 5
(7/18)

Read Chapter 14: Section 3, Section 4, and Section 5
Surface Area Video
Volume Video
Vocabulary and Review Video
Review Part II Video
Geometry Practice Problems
Study for Midterm Exam

Assignments due by 7/21: Pythag. Thm, Surface Area, and Volume (MA)
Homework 14.3-14.5 (MML)

Extra Resources:

*These are extra videos on perimeter, area, surface area, and volume. Do not worry about the problem numbers. They are from a different textbook.

Perimeter and Area I (#9 and #13) Video
Perimeter and Area II (#15) Video
Perimeter and Area III (#21) Video
Surface Area and Volume (#7) Video
Surface Area and Volume of a Prism (#11) Video
Surface Area and Volume of a Sphere and Cylinder (#9) Video

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Module 6 Read Chapter 9: Section 1 and Section 2

(7/23) Introduction to Probability Video
Counting Principle and Tree Diagrams Video
Probability with Dice Video
PowerPoint Presentation on Coins

Assignments due by 7/24: Probability with Coins Investigation worksheets (OI)
Probability and Tree Diagrams (MA)

Module 7 PowerPoint Presentation on the Sock Problem
(7/25) The Sock Problem Video
PowerPoint Presentation on cards
Probability with Cards Video
Probability with Cards Part II Video

Assignments due by 7/28: Homework 9.1-9.2 (MML)

Module 8 Read Chapter 9: Section 3, Section 4, and Section 5
(7/29) Probability with Spinners Video
Sample TeXES Problem 1 Video
Sample TeXES Problem 2 Video
Vocabulary Video

Assignments due by 7/30: Probability with Spinners Investigation Worksheets (OI)
Permutations (MA)
Homework 9.3-9.5 (XL)

Module 9 Read Chapter 10: Section 1 and Section 2
(7/31) Stem and Leaf Plot Video
Histogram Video
Box and Whisker Plot Video
Circle Graph Video
Scatter Plot/Line Graph Video

Assignments due by 8/1: An Investigation of Box Plot and Histogram Worksheets (OI)
An Investigation of the Scatter Plot Worksheets (OI)
Bar Graphs and Circle Graphs (MA)
Homework 10.1-10.2 (MML)

Module 10 Read Chapter 10: Section 3 and Section 4
(8/4) An Introduction to the Calculator Part I Video

An Introduction to the Calculator Part II Video
An Introduction to the Calculator Part III Video
Standard Deviation by Formula Part I Video
Standard Deviation by Formula Part II Video
Standard Deviation by Formula Part III Video
Standard Deviation by Calculator Video

Assignments due by 8/5: Homework 10.3-10.4 (MML)

Your **Course Project** is due by Friday, August 1, 2014. Please upload it in the dropbox on ecollege. If you find that your file is too big, then you can email me at shari.beck@navarrocollege.edu. Please ask for a confirmation so that you will know that the project has been received.

On Wednesday, August 6, you will take the final exam from 10:00 AM – 12:00 PM. The exam will be on the Corsicana campus of TAMU-Commerce. The room will be posted on the door to the building and my office door on the day of the exam.

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