Math 351.71W   TOPICS IN MATH FOR ELEM. TEACHERS II
COURSE SYLLABUS: SPRING 2013

Instructor: Dr. Shari Beck
Office Location: WCB 111 (on the Navarro College campus)
Office Hours: MWF 10-11 AM; M 12:20-1 PM; W 12:20-1 PM; TTH 9:30 AM
              T 10:50-12:30 PM; T 1:50-2:50 PM
Office Phone: 903-875-7518
Office Fax: 903-875-7523
University Email Address: shari.beck@navarrocollege.edu

COURSE INFORMATION

Materials – Textbooks, Readings, Supplementary Readings:


You will be required to have an access code for My Math Lab. The course ID needed to register in the My Math Lab program is beck27015

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 under girds 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 Math XL 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 Sunday following the week of the assignment. The Math XL 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
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 email me your PowerPoint presentation as your final project or mail me a printout of your slides. 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 Monday, April 29, 2013.

**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 times are listed below. **If you cannot make these times, you will need to drop this course. The exam will not be given on the Commerce campus.**

**On Monday, February 25, you will take the midterm exam from 5:00 – 7:00 pm. The exam will be on the Corsicana campus of TAMU-Commerce. The room will be announced at a later date.**
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 7:00 regardless of what time you arrive.

If that does not fit your schedule, you may also come to any of my office hours listed below:
Monday, February 25 from 10am-12pm or 1pm-3pm
Tuesday, February 26 from 11-1
Please note that you must arrive early enough to be finished with the exam by the end of the listed time. My office is on the Corsicana campus of TAMU-C in the Waller Classroom Building room 111.
Your only other option is to pay to take the exam at a local junior college 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. **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 times are listed below. **If you cannot make these times, you will need to drop this course. The exam will not be given on the Commerce campus.**

**On Monday, May 6, you will take the final exam from 5:00 – 7:00 pm. The exam will be on the Corsicana campus of TAMU-Commerce. The room will be announced at a later date.**
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 7:00 regardless of what time you arrive.

If that does not fit your schedule, you may also come to any of my office hours listed below:
Monday, May 6 from 8-10 am or 10:30 am -12:30 pm
Please note that you must arrive early enough to be finished with the exam by the end of the listed time. My office is on the Corsicana campus of TAMU-C in the Waller Classroom Building room 111.
Your only other option is to pay to take the exam at a local junior college 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. 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**

<table>
<thead>
<tr>
<th>Numerical Average</th>
<th>Letter Grade</th>
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<tbody>
<tr>
<td>90 – 100</td>
<td>A</td>
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<tr>
<td>80 – 89</td>
<td>B</td>
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<tr>
<td>70 – 79</td>
<td>C</td>
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<tr>
<td>60 – 69</td>
<td>D</td>
</tr>
<tr>
<td>0 – 59</td>
<td>F</td>
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**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

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@tamu-commerce.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:
XL: indicates that the homework assignment is located on Math XL
MA: indicates that this is a Media assignment and it is located on Math XL
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.

Week 1
(1/14) Introductions on the Discussion Board
Read Chapter 14: Section 1 and Section 2
PowerPoint Presentation on Transformations
PowerPoint Presentation on Transformations in the Coordinate Plane

Week 2
(1/21)
Translations Part I Video
Translations Part II Video
Reflections Part I Video
Reflections Part II Video
Rotation Video

Assignments due by 1/27:
Orientation (XL)
Transformations (MA)
Homework 14.1-14.2 (XL)

Week 3
(1/28)
Read Chapter 14: Section 4 and Section 5
PowerPoint on Symmetry

Assignments due by 2/3:
Symmetry (MA)
Tessellation (MA)
Homework 14.4-14.5 (XL)

Week 4
(2/4)
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 2/10:
Homework 11.1-11.3 (XL)

Week 5
(2/11)
Read Chapter 11: Section 4
Read Chapter 13: Section 1 and Section 2
PowerPoint on Similar Figures/Solids
Naming Parts of a Picture Video
Nets and Solids Video
Perimeter Video
Area Video

Assignments due by 2/17:
An Investigation of Nets and Solids worksheets (OI)
Homework 11.4 (XL)
Perimeter and Area (MA)

Week 6
(2/18)
Read Chapter 13: 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 2/24:  Pythag. Theorem, Surface Area, and Volume (MA)
                           Homework 13.3-13.5 (XL)

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

Week 7

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Week 8  
Read Chapter 9: Section 1 and Section 2  
Introduction to Probability Video  
Counting Principle and Tree Diagrams Video  
Probability with Dice Video  
PowerPoint Presentation on Coins  

Assignments due by 3/17:  
Probability with Coins Investigation  
worksheets (OI)  
Probability and Tree Diagrams (MA)  

Week 9  
PowerPoint Presentation on the Sock Problem  
The Sock Problem Video  
PowerPoint Presentation on cards  
Probability with Cards Video  
Probability with Cards Part II Video  

Assignments due by 3/24:  
Homework 9.1-9.2 (XL)  

Week 10  
Read Chapter 9: Section 3, Section 4, and Section 5  
Probability with Spinners Video  
Sample TeXES Problem 1 Video  
Sample TeXES Problem 2 Video  
Vocabulary Video  

Assignments due by 4/1:  
Probability with Spinners Investigation  
Worksheets (OI)  
Permutations (MA)  
Homework 9.3-9.5 (XL)  

Week 11  
Read Chapter 10: Section 1 and Section 2  
Stem and Leaf Plot Video  
Histogram Video  
Box and Whisker Plot Video  
Circle Graph Video  
Scatter Plot/Line Graph Video  

Assignments due by 4/7:  
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 (XL)  

Week 12  
Read Chapter 10: Section 3 and Section 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 4/14: Homework 10.3-10.4 (XL)

Week 13
(4/15)
Application of Standard Deviation Video
Weighted Averages Video

Week 14
(4/22)
Review for Final Exam and finish Project(s)/Project due by April 29.

Week 15
Your exams will be administered in a face-to-face environment. The times are listed below. If you cannot make these times, you will need to drop this course. The exam will not be given on the Commerce campus.

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