Department of Mathematics and Statistics
MTH 128: Intermediate Mathematics for Elementary Teachers
Spring 2020

Course Description: Elementary concepts of geometry and measurement, probability, and statistics with an emphasis on problem solving and critical thinking

Course Prerequisite: MTH 127 with a grade C or better

Class meeting times and room: Tuesday and Thursday 9:30 – 10:45 in Bush Math Building room 209

Instructor: Cheryl Janusa
Office: Bush Math building room 329
Office Phone: (936) 468-1742
Email: janusace@sfasu.edu
Office Hours: These hours have been set aside specifically to serve students:
Monday and Wednesday: 2:30 – 3:30 pm
Tuesday and Thursday: 11:00 – 11:30 am and 2:00 – 3:00 pm
Additional times are available by appointment.

Text and Materials:
- Textbook: Mathematics for Elementary Teachers, 5th ed., by Sybilla Beckman. You will not need to purchase access to MyMathLab. The textbook is available in hardback (ISBN 9780134392790), loose-leaf (ISBN 9780134423319), or electronic “Ebook” (ISBN 9780134423401) formats. Any format is acceptable. This textbook will also be used in both MTH 128 and MTH 129. There is a text book on reserve at the library circulation desk listed under the instructor Mrs. Prince.
- A simple four-function calculator may be used in this course. However, you should not rely on computers and/or calculators to such an extent that they keep you from developing your own skills. You may not allow calculators to be used on certain exams or parts of certain exams. You should bring your calculator to every class. You may not use your cellphone or your iPod/iPad/iWatch for a calculator during class or exams.

Additional Help:
- Take advantage of meeting with the instructor during office hours (see above) and email. If you cannot visit during office hours, appointments are available.
- Free tutoring is available from the Academic Assistance and Resource Center (AARC). For more information, visit the AARC website at www.sfasu.edu/aarc.
- Be careful of how you seek and use additional help. Developing an understanding of the concepts and explaining the concepts is much more important than having a correct answer.

Grading Policy: There will be three 75 minute exams and a 150 minute final exam. Your course grade will be determined as follows:

<table>
<thead>
<tr>
<th>Component</th>
<th>Percentage Range</th>
<th>Grade</th>
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<tbody>
<tr>
<td>20% Graded Assignments</td>
<td>90% - 100%</td>
<td>A</td>
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<tr>
<td>20% Exam I</td>
<td>80% - 89.5%</td>
<td>B</td>
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<tr>
<td>20% Exam II</td>
<td>70% - 79.5%</td>
<td>C</td>
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<td>20% Exam III</td>
<td>60% - 69.5%</td>
<td>D</td>
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<tr>
<td>20% Final Exam</td>
<td>0% - 59.5%</td>
<td>F</td>
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Resurrection Policy. If you score a 70 or better on the final exam and this grade is higher than one of your three midterm exam grades, we will replace your lowest exam grade with your final exam grade. The resurrection policy does not apply to your homework or writing assignment grades.
Exams are scheduled far in advance and only administered at the scheduled time. A student will be allowed to take the exam prior to the scheduled time for one of the following reasons:

- A medical excuse or extreme hardship such as a family emergency. The student must provide proper documentation and properly contact the Office of Students Rights and Responsibilities as stated in the SFA attendance policy, http://www.sfasu.edu/policies/class-attendance-6.7.pdf

- Student participation in approved university-sponsored events. Faculty members sponsoring activities that require their students to be absent from other classes must submit proper notification to the provost and vice president of academic affairs for all attending students.

The final exam is comprehensive and mandatory. By the resurrection policy, the final exam grade will replace the lowest exam grade provided that the final exam grade is greater than a 70 and greater than the lowest exam grade. If a student misses an exam, there are no make-up exams. If an exam is missed, the resurrection policy will be used for the missed exam.

The final exam for MTH 128 is on Tuesday, May 5 from 6:30pm - 9:00pm, TBA. Students having another exam at this time may take the MTH-128 final at an earlier time.

Testing Policies

- Students are required to take each exam. If you miss an exam for any reason, then the score for the missed exam will be a zero. This grade can be replaced by the final exam score by the resurrection policy. If more than one exam is missed, the final exam grade will replace only one of the missed exams.

- You must bring and display either your SFASU Student ID or a valid driver’s license before being permitted to take each test and the final exam. The ID must display a clear facial picture of the student.

- Students may not share calculators during an exam. Students may not use cell phone calculators, computers, or other non-approved devices during an exam. If you bring your cell phone to the exam venue, please remember to turn it off and place it in bag. Violation of this policy will be considered as academic dishonesty and dealt with accordingly. You will not be permitted to use your cell phone as a calculator, so plan ahead.

Homework: MTH 128 is an activities based course. The activities along with the textbook will help you develop an understanding of the concepts in each section. Textbook homework is due at the begging of the following class. Late homework is not accepted. If you cannot attend class, you may email your scanned homework before the start of class.

Making Your Homework Easy to Read and Easy to Grade

- Make sure your handwriting is legible.
- Please write your name on each page
- Problems should be clearly labeled and numbered on the left side of the page. There should also be a visible separation between problems.
- It is good practice to first work out the solutions to homework problems on scratch paper, and then to neatly write up your solutions. This will help you turn in a clean finished product.
- You should write up your solutions by yourself. You should always acknowledge any help received at the top of the assignment or in the right-hand margin.

Attendance Policy: Regular attendance is expected and necessary for your success. The SFA attendance policy is available at the following link: www.sfasu.edu/policies/class-attendance-6.7.pdf. Attendance will not be formally factored into your course grade, but missing in-class activities, quizzes, etc., could lower your assignment grade. If you must be absent from class, submit a notification of absence through the Office of Community Standards, http://www.sfasu.edu/judicial/. The direct link for the absence notification is https://cm.maxient.com/reportingform.php?SFASStateUniv&layout_id=5.
General Policies and Information

- You earn your grade by communicating your understanding of the material through the homework and tests. Clearly communicating mathematics will be essential in this course.
- Any questions you have will likely be ones that other students want answered as well, so do not hesitate to ask questions as the material is presented. The purpose of attending class is for you to learn the material, not just a time for you to copy notes. Participating and being involved in class will help you be successful.
- Cell Phones: Your cell phone should be on silent and out of sight in class. If there is ever an issue that might cause your cell phone to ring or for you to need to be reached, please discuss this with me beforehand. Research shows that human brains cannot multitask complex, abstract information with cell phone usage, so this policy is designed for your benefit.
- Students are expected to respect the learning environment of their fellow students. Behavior that disrupts this environment will not be tolerated.
- Bring all necessary materials to each class, be attentive to the task at hand, take notes, and be prepared to participate in class discussions. You must make an additional commitment of doing work outside of class. Most importantly, ask for help when you need it.
- Resources and announcement for the course will be available in D2L.

The following is an excerpt from SFA Policy 5.4:

The federal definition of a credit hour is an amount of work represented in intended learning outcomes and verified by evidence of student achievement that is an institutionally established equivalency that reasonably approximates:

1. Not less than one hour of classroom or direct faculty instruction and a minimum of two hours out-of-class student work each week for approximately fifteen weeks for one semester or trimester hour of credit, or 10 to 12 weeks for one quarter hour of credit, or the equivalent amount of work over a different amount of time, or;

2. At least an equivalent amount of work as outlined in item 1 above for other academic activities as established by the institution including laboratory work, internships, practica, studio work, and other academic work leading to the award of credit hours.

To this end, all students in courses offered by the Department of Mathematics and Statistics that wish to be successful should plan to spend a minimum of two hours outside of class for every credit hour associated with this course. Expected activities to be completed in the time outside of class include reviewing notes from previous class meetings, reading assigned course resources, completing all assigned exercises and projects, and performing periodic assessment preparation.

See [http://www2.sfasu.edu/math/docs/syllabi/MTH128Syllabus.pdf](http://www2.sfasu.edu/math/docs/syllabi/MTH128Syllabus.pdf) for elements common to all sections.
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<thead>
<tr>
<th>Week</th>
<th>Date</th>
<th>Topic</th>
<th>Activity (used on this date)</th>
<th>Section, Page and Problem Numbers</th>
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<tbody>
<tr>
<td>1</td>
<td>Thursday</td>
<td>Introduction Using Compass and Protractor</td>
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<td>10A</td>
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<td>2</td>
<td>Tuesday</td>
<td>10.1 Lines and Angles</td>
<td>10B, 10C</td>
<td>Read Section 10.1</td>
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<td>Thursday</td>
<td>10.1 Lines and Angles (con’t.)</td>
<td>10D, 10E, 10G</td>
<td>10.1: pp. 463-465 #2</td>
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<td>3</td>
<td>Tuesday</td>
<td>10.3 Circles and Spheres</td>
<td>10L, 10M</td>
<td>10.1: pp. 463-465 #11</td>
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<td></td>
<td>Thursday</td>
<td>10.4 Triangles, Quadrilaterals and Other Polygons</td>
<td>10P, 10Q, 10R</td>
<td>10.3: pp. 476-477 #2, 3</td>
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<td>4</td>
<td>Tuesday</td>
<td>10.4 Triangles, Quadrilaterals and Other Polygons (con’t) PP. 489-490 #18</td>
<td>10S, 10U, 10O</td>
<td>10.4: pp. 487-490 #3, 17</td>
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<td>Exam 1: Chapter 10</td>
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<td>(10.4: pp. 487-490 #8, 11)</td>
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<td>11.1 Concepts of Measurement 11.4 Converting from One Unit of Measurement to Another Section 4.1 #1</td>
<td>11A, 11B, 11C, 11D, 11G, 11H</td>
<td>TEKS Writing #1</td>
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<td>Thursday</td>
<td>11.2 Length, Area, Volume, and Dimension 12.1 Areas of Rectangles Revisited 12.2 Moving and Additivity Principles About Area</td>
<td>11E 12A, 12B</td>
<td>11.1: p. 504 #3 11.4: pp. 521-523 #1, 3</td>
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<td>Tuesday</td>
<td>12.3 Areas of Triangles</td>
<td>12C, 12D, 12E, 12F</td>
<td>12.1: pp. 529-530 #4 12.2: pp. 534-535 #3, 6</td>
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<td>Thursday</td>
<td>12.4 Areas of Parallelograms and Other Polygons</td>
<td>12G, 12H, 12I</td>
<td>12.3: pp. 541-543 #2, 9</td>
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<td>Tuesday</td>
<td>12.6 Area and Circumference of Circles and the Number Pi</td>
<td>12N 12O</td>
<td>12.4: pp. 547-549 #4, 9, 10, 11</td>
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<td>Thursday</td>
<td>12.8 Contrasting and Relating the Perimeter and Area of Shapes</td>
<td>12Q, 12S, 12R</td>
<td>12.6: pp. 559-561 #2, 6</td>
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<td>Video</td>
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<td>Thursday</td>
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<td></td>
<td>Tuesday</td>
<td>Spring Break</td>
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<td>Thursday</td>
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| 9    | Tuesday 3/17/20 | 12.9 Using the Moving and Additivity Principles to Prove the Pythagorean Theorem  
13.1 Polyhedra and Other Solid Shapes | 12U, 12V  
13A, 13B | TEKS Writing #2 |
|      | Thursday 3/19/20 | 13.2 Patterns and Surface Area | 13E, 13F  
13G, 13H | 12.9: p. 576 #1, 6  
13.1: pp. 587-588 #3 |
| 10   | Tuesday 3/24/20 | 13.3 Volumes of Solid Shapes  
**Practice Exercise #4, p. 574** | 13K, 13L  
13M, 13N, 13P | 13.2: pp. 595-597  
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|      | Thursday 3/26/20 | 14.1 Reflections, Translations, and Rotations  
|      | Tuesday 3/31/20 | 14.3 Congruence  
14.4 Constructions with Straightedge and Compass | 14E, 14G,14H,  
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|      | Thursday 4/2/20 | 14.5 Similarity  
14.6 Dilations and Similarity | 14Q, 14W | 14.3: pp. 635-638 #1, 5, 7  
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| 12   | Tuesday 4/7/20  | 14.7 Areas, Volumes and Similarity | 14X | 14.5: pp. 652-653 #2, 3, 10  
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|      | Thursday 4/9/20 | Easter Holiday | | |
| 13   | Tuesday 4/14/20 | Video | 13P, 14Z | 14.7: pp. 669-670 #5, 6, 7 |
|      | Thursday 4/16/20| **Exam 3 Chapters 12.9, 13 and 14** | | |
| 14   | Tuesday 4/21/20 | 15.1 Formulating Statistical Questions,  
Gathering Data, and Using Samples  
15.2 Displaying Data and Interpreting Data Displays | 15A, 15C  
15E, 15G | TEKS Writing #3 |
|      | Thursday 4/23/20 | 15.3 The Center of Data: Mean, Median, and Mode | 15K, 15L  
15N | 15.1: pp. 680-681 #5, 10  
15.2: pp. 691-693  
#3ab, 5abc |
| 15   | Tuesday 4/28/20 | 15.4 Summarizing, Describing, and Comparing Data Distributions | 15T, 15U  
15V, 15W | 15.3: pp. 700-703 #4, 7, 10 |
|      | Thursday 4/30/20| Video | | 15.4: pp. 715-719 #1, 12 |
| 16   | Monday 5/4/20  | Final Exam - Tuesday, May 5  
6:30pm - 9:00pm, room TBD | | |