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

Class meeting times and room:
Math 1351.001: 12:30 pm – 1:45 pm, Tuesday and Thursday, Bush Math building 206


Email: janusace@sfasu.edu Office Phone: (936) 468-1742

Office Hours: These hours have been set aside specifically to serve students.
Tuesday and Thursday: 9:20 am – 11:00 am and 1:50 pm – 2:40 pm
Additional times are available by appointment.

Text and Materials:
  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. There is a textbook 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 should bring your calculator to every class.
- Paper and pencils; optional locking compass, scissors, and ruler

Grading Policy: Your final grade will be determined as follows:

<table>
<thead>
<tr>
<th>Weights of Components</th>
<th>Final Average and Letter Grade</th>
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<tbody>
<tr>
<td>20% Assignments (Class Activities 5% and Homework and Writing assignments 15%)</td>
<td>90% - 100% A</td>
</tr>
<tr>
<td>60% Exams (3 Unit exams worth 20% each)</td>
<td>80% - 89.5% B</td>
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<tr>
<td>20% Final Exam (Comprehensive and required)</td>
<td>70% - 79.5% C</td>
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<tr>
<td>100% Final Course</td>
<td>60% - 69.5% D</td>
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<tr>
<td>100% Final Course</td>
<td>0% - 59.5% F</td>
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</tbody>
</table>

Exams: There will be three 75 minute exams and a 120-minute final exam. 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. The time allowed for the final exam is 120-minutes. 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.

Testing Policies
• Students are required to take each exam.
• 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. Cell phones must be turned-off during the exam and placed in a bag.

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. You may visit tutors at the walk-in tables or participating in the SI sessions.
• 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.

Homework: Math 1351 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 submitted in the D2L drop box by the due date. In addition to textbook problems, there will be quizzes covering basic concepts and definitions.

Making Your Homework Easy to Read and Easy to Grade
• Make sure your handwriting is legible.
• Please write you 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. The space to the right of the right margin should be blank.
• 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 Students Rights and Responsibilities. 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.
- 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.

SFASU values students’ mental health and the role it plays in academic and overall student success. SFA provides a variety of resources to support students mental health and wellness. Many of these resources are free, and all of them are confidential.

**On-campus Resources:**

- **SFASU Counseling Services:** [www.sfasu.edu/counselingservices](http://www.sfasu.edu/counselingservices)
  3rd Floor Rusk Building 936-468-2401
- **SFASU Human Services Counseling Clinic:**
  [www.sfasu.edu/humanservices/139.asp](http://www.sfasu.edu/humanservices/139.asp)
  Human Services Room 202 936-468-1041

**Crisis Resources:**

- Burke 24-hour crisis line: 1(800) 392-8343
- Suicide Prevention Lifeline: 1(800) 273-TALK (8255)
- Crisis Text Line: Text HELLO to 741-741

See [http://www3.sfasu.edu/math/docs/syllabi/MATH1351Syllabus.pdf](http://www3.sfasu.edu/math/docs/syllabi/MATH1351Syllabus.pdf) for elements common to all sections.
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<tr>
<th>Week</th>
<th>Date</th>
<th>Topic</th>
<th>Activity in-class</th>
<th>Assignment due by end of next day</th>
<th>Suggested Practice</th>
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<td>1</td>
<td>8/24</td>
<td>§ 10.1 Lines and Angles</td>
<td>10A, 10B, 10C</td>
<td>pp. 463-464 #2, 3</td>
<td>pp 460 - 462 #4</td>
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<td></td>
<td>8/26</td>
<td>§ 10.1 Lines and Angles</td>
<td>10D, 10E, 10G</td>
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<td>2</td>
<td>8/31</td>
<td>§ 10.3 Circles and Spheres</td>
<td>10L, 10M, 10O</td>
<td>pp. 476-477 #2, 3</td>
<td>pp. 475 - 476 #2, 3, 4</td>
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<td>What is difference in wording in #2 and #3?</td>
<td>pay attention to key words</td>
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<td>3</td>
<td>9/2</td>
<td>§10.4 Triangles, Quadrilaterals and Other Polygons</td>
<td>10P, 10Q, 10R, 10T</td>
<td>pp. 487-490 #3</td>
<td>pp. 484 - 486 #1, 2, 3, 4, 5, 6, 7</td>
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<td></td>
<td>9/7</td>
<td>§10.4 Triangles, Quadrilaterals and Other Polygons (continued)</td>
<td>10S, 10U</td>
<td>pp. 487-490 #8, 11</td>
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<td>9/14</td>
<td>§11.4 Converting from One Unit of Measurement to Another</td>
<td>11G, 11H</td>
<td>11.4: pp. 521-523 #1, 2, 3</td>
<td>#1, 2</td>
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<td>9/16</td>
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<td>5</td>
<td>9/21</td>
<td>§12.1 Areas of Rectangles Revisited</td>
<td>12A</td>
<td>12.1: pp. 529-530 #4</td>
<td>§12.1 #1</td>
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<td>§12.2 Moving and Additivity Principles About Area</td>
<td>12B</td>
<td>12.2: pp. 534-535 #3, 6</td>
<td>§12.2 #1, 2, 3</td>
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<td>9/23</td>
<td>§12.3 Areas of Triangles</td>
<td>12C, 12D, 12F; 12E together?</td>
<td>pp. 541-543 #2, 9</td>
<td>#1, 2, 3</td>
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<td>6</td>
<td>9/28</td>
<td>§12.4 Areas of Parallelograms and Other Polygons</td>
<td>12G, 12H, 12I</td>
<td>pp. 547-549 #4, 9</td>
<td>§12.4 #1, 2</td>
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<td>9/30</td>
<td>§12.6 Area and Circumference of Circles and the Number Pi</td>
<td>12N, 12O</td>
<td>pp. 559-561 #5</td>
<td>§12.6 #1, 2, 5</td>
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<td>10/5</td>
<td>§12.8 Contrasting and Relating the Perimeter and Area of Shapes</td>
<td>12Q, 12R, 12S</td>
<td>pp. 569-570 #4, 10</td>
<td>§12.8 #4</td>
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<td>10/7</td>
<td>§12.9 Using the Moving and Additivity Principles to Prove the Pythagorean Theorem</td>
<td>12U</td>
<td>12.9: p. 576 #4, 6 (only right triangles)</td>
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<td>Week</td>
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<td>Activity in-class</td>
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<td>Suggested Practice</td>
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<td>8</td>
<td>10/12</td>
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<td>10/14</td>
<td>Exam 2: Sections 12.1, 12.2, 12.3, 12.4, 12.6 12.8, 12.9</td>
<td>13E, 13F, 13G, 13H</td>
<td>TEKS Writing #2</td>
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<td>9</td>
<td>10/19</td>
<td>§13.2 Patterns and Surface Area (CA 13 H next class?)</td>
<td>13K #1 and 2, 13L, 13N, 13P</td>
<td>pp. 606-607 #15, 18, 22</td>
<td># 2, 7, 8, 9, 11</td>
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<tr>
<td>10/21</td>
<td>§13.3 Volumes of Solid Shapes Review Practice Exercise #4, p. 574</td>
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<td>10/26</td>
<td>§14.1 Reflections, Translations, and Rotations §14.2 Symmetry</td>
<td>14A, 14B, 14E</td>
<td>14.1: pp. 617-619 #4, 8, 10, 12</td>
<td>§14.1 #3, §14.2 #1</td>
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<tr>
<td>10/28</td>
<td>§14.3 Congruence</td>
<td>14G, 14H, 14I</td>
<td>14.3: pp. 636-638 #5, 7, 9</td>
<td>§14.3 #2, 3</td>
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<td>11/2</td>
<td>§14.4 Constructions with Straightedge and Compass</td>
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<td>pp. 642-643 #1, 3, 7</td>
<td>§14.4 #1, 2, 3</td>
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<td>11/4</td>
<td>§14.5 Similarity §14.6 Dilations and-Similarity (only similarity)</td>
<td>14Q V</td>
<td>14.5 pp. 652 #2, 5 14.6: pp.662-663 #1, 6</td>
<td>§14.5 #1, 2, 3 pp 649 - 650 §14.6 #1, 2</td>
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<tr>
<td>12</td>
<td>§14.7 Areas, Volumes and Similarity</td>
<td>14W, 14X, 14Z #1,3</td>
<td>14.7 pp. 669 #7</td>
<td>§14.7 #1, 2, 3, 4 pp 667 - 668</td>
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<tr>
<td>11/11</td>
<td>§15.1 Formulating Statistical Questions, Gathering Data, and Using Samples §15.2 Displaying Data and Interpreting Data Displays</td>
<td>15A, 15C, 15E, 15G</td>
<td>15.1: pp. 680-681 #5, 10 15.2: p. 692 #2, 3</td>
<td>§15.1 #3, 4 pp 679 - 680 §15.2 #1 pp 690 - 691</td>
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<td>13</td>
<td>§15.3 The Center of Data: Mean, Median, and Mode</td>
<td>15K, 15L, 15M, 15N</td>
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<td>11/18</td>
<td>Exam 3 Chapters 13 and 14</td>
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<td>TEKS Writing #3</td>
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<td>11/22 – 26</td>
<td>Thanksgiving Break</td>
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<td>14</td>
<td>11/30</td>
<td>§15.4 Summarizing, Describing, and Comparing Data Distributions</td>
<td>15T, 15U, 15V, 15W</td>
<td>pp. 715 and 718 #1, 12</td>
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<tr>
<td>12/2</td>
<td>Catch-up or Review</td>
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<tr>
<td>15</td>
<td>12/9</td>
<td>Final Exam Thursday, December 9, 10:30 am – 12:30 pm. Required and Comprehensive</td>
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Math 1351 – Intermediate Mathematics for Elementary Teachers
Course Syllabus

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

Credit hours: 3

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.

Course Prerequisites and Corequisites: Math 1350.

Course outline:

- Geometric Figures: Definitions, Properties, and Relationships
  - Build basic vocabulary of geometric figures
  - Analyze properties of two and three dimensional figures
  - Explore relationships between lines, planes, polygons, and solids

- Geometry and Measurement
  - Investigate standard and nonstandard units of measure
  - Explore linear measurement: perimeter, circumference
  - Explore area of regular and irregular shapes
  - Use the Pythagorean Theorem appropriately
  - Explore measures of surface area and volume: lateral surface area, base, height, slant height
  - Investigate temperature as a form of measurement

- Geometry of Congruence, Similarity, and Transformations
  - Investigate properties of congruent and similar figures
  - Explore ratio and proportion as applied to geometric figures
  - Perform basic constructions using Mira, paper folding, compass, straightedge, and technology (when applicable)
  - Perform rigid and similarity transformations on a variety of figures
  - Explore properties and outcomes of rigid transformations
  - Explore types of symmetry

- Statistics
  - Collect, organize, analyze, and present real data
  - Utilize appropriate types of graphs for various data types
  - Interpret graphs and tables
  - Investigate the use of graphs to distort statistics
  - Analyze measures of central tendency and dispersion

Approximate time spent: 20%
• **Counting Principles and Probability**
  - Explore basic counting principles
  - Understand and utilize factorial notation
  - Explore the language of uncertainty: sample space, outcome, event, equally likely, mutually exclusive events, certain and impossible events
  - Investigate experimental probability: simulation
  - Determine Expected Value

**Academic Integrity**
Academic integrity is a responsibility of all university faculty and students. Faculty members promote academic integrity in multiple ways including instruction on the components of academic honesty, as well as abiding by university policy on penalties for cheating and plagiarism.

The penalty for a student found cheating on any part of an assignment, quiz, or exam in this class will range from a grade of zero on the work to a grade of F in the course, and may result in additional, more severe disciplinary measures. A student who allows another to copy his work and the student copying the work are both guilty of cheating. Do your own work. Do not show your completed work to others. Do not allow others to copy your work.

**Definition of Academic Dishonesty (SFA policy 4.1):**
Academic dishonesty includes both cheating and plagiarism. Cheating includes, but is not limited to:
- using or attempting to use unauthorized materials on any class assignment or exam;
- falsifying or inventing of any information, including citations, on an assignment;
- helping or attempting to help other student(s) in an act of cheating or plagiarism.

Plagiarism is presenting the words or ideas of another person as if they were one’s own. Examples of plagiarism include, but are not limited to:
- submitting an assignment as one’s own work when it is at least partly the work of another person;
- submitting a work that has been purchased or otherwise obtained from the Internet or another source;
- incorporating the words or ideas of an author into one's paper or presentation without giving the author credit.

**Withheld Grades Semester Grades (SFA Policy 5.5)**
Ordinarily, at the discretion of the instructor of record and with the approval of the academic chair/director, a grade of WH will be assigned only if the student cannot complete the course work because of unavoidable circumstances. Students must complete the work within one calendar year from the end of the semester in which they receive a WH, or the grade automatically becomes an F. If students register for the same course in future terms the WH will automatically become an F and will be counted as a repeated course for the purpose of computing the grade point average. The circumstances precipitating the request must have occurred after the last day in which a student could withdraw from a course. Students requesting a WH must be passing the course with a minimum projected grade of C.

**Students with Disabilities**
To obtain disability related accommodations, alternate formats and/or auxiliary aids, students with disabilities must contact the Office of Disability Services (ODS), Human Services Building, and Room 325, 468-3004 / 468-1004 (TDD) as early as possible in the semester. Once verified, ODS will notify the course instructor and outline the accommodation and/or auxiliary aids to be provided. Failure to request services in a timely manner may delay your accommodations. For additional information, go to [http://www.sfasu.edu/disabilityservices](http://www.sfasu.edu/disabilityservices).

**SFASU Mental Health Statement:** SFASU values students’ mental health and the role it plays in academic and overall student success. SFA provides a variety of resources to support students mental health and wellness. Many of these resources are free, and all of them are confidential.

**On-campus Resources:**
SFASU Counseling Services
Acceptable Student Behavior
Classroom behavior should not interfere with the instructor’s ability to conduct the class or the ability of other students to learn from the instructional program (see the Student Conduct Code, policy 10.4). Unacceptable or disruptive behavior will not be tolerated. Students who disrupt the learning environment may be asked to leave class and may be subject to judicial, academic or other penalties. This prohibition applies to all instructional forums, including electronic, classroom, labs, discussion groups, field trips, etc. The instructor shall have full discretion over what behavior is appropriate/inappropriate in the classroom. Students who do not attend class regularly or who perform poorly on class projects/exams may be referred to the Early Alert Program. This program provides students with recommendations for resources or other assistance that is available to help SFA students succeed.

Student Learning Outcomes (SLO): At the end of MTH 128, a student who has studied and learned the material should be able to:

1. Use problem solving strategies to model, construct, and solve problems within and outside mathematics.
2. Use technology to explore geometric concepts and perform geometric constructions and transformations.
3. Apply spatial visualization skills to construct, transform, and measure two and three dimensional objects.
4. Apply concepts of congruence and similarity.
5. Use mathematical reasoning to develop strategies of conjecture and justification, leading to geometric proof.
6. Understand measurement as a process and apply basic concepts of measurement to real world settings.
7. Use basic counting principles and apply concepts of probability theory.
8. Apply basic concepts of statistics, including data classification, collection, and analysis.
9. Understand geometry as an axiomatic system.

There are no specific program learning outcomes for this major addressed in this course. It is a general education core curriculum course and/or a service course.

Date of document: 08/09/2021