I. COURSE INFORMATION

Instructor: Mrs. Christine Peters
Phone: 825-5827
E-mail: christine.peters@tamucc.edu
Office: CI 308
Office Hours: Thursday, 6:00-7:00 pm

II. COURSE DESCRIPTION

This course is the third in a sequence exploring elementary mathematics with deeper understanding, connections, and communication. Formal and informal geometry concepts and skills will be developed through problem-solving scenarios in collaborative groups. Manipulatives and technology will support the problem-solving approach.

II. PREREQUISITES for the COURSE

MATH 1314: College Algebra or equivalent
SMTE 1350: Fundamentals of Math I
SMTE 1351: Fundamentals of Math II

IV. TEXTS and OTHER SUPPLIES

- Mathematical Reasoning for Elementary Teachers, Edition 5
- Scientific or graphing calculator
- Compass, Protractor, and Ruler
- Dot paper and rectangular grid

V. STUDENT LEARNING OUTCOMES

If the student meets the expectation of the instructor for completing assigned tasks, reflecting on the daily activities, studying the key concepts discussed during class, and getting additional help when needed, then the student will be able to:

1) Use, model and explain measurable attributes and appropriate strategies for making direct and indirect measurements of various attributes; model and explain the appropriate use of measurement tools, and discuss the precision and accuracy of measurements made.
2) Identify, analyze, and classify shapes by their properties and relationships; use deductive reasoning to draw conclusions; and discuss the Van Hiele Level of Geometric Thinking of tasks.
3) Use inductive and deductive reasoning to develop, justify and use formulas to find length, angle measures, perimeter, area and volume of polygons, circles, and basic three dimensional shapes.
4) Analyze and use the relationships between 3D and 2D representations of objects, including the use of nets, orthographic drawings, and isometric drawings.
5) Use, model and explain translations, rotations, reflections, and dilations/contractions and their relationship to congruence, similarity, symmetry, and tessellations. Relate these concepts to the mathematics in nature, art, architecture and society, including the art of M.C. Escher, circle-based art, quilting, and the Golden Ratio.

6) Identify correct and incorrect mathematical reasoning, and analyze error patterns present in EC-6 student work, and suggest remediation for these errors.

7) Write, and solve mathematical problems that involve geometric reasoning, and basic principles of mathematical modeling in a variety of mathematical or non-mathematical settings.

VI. INSTRUCTIONAL METHODS and ACTIVITIES

The course will be a combination of lectures, individual, and group work. Students are expected to participate in group and whole class discussions by contributing with knowledge and thoughtful evaluation of the contribution of others. Using physical models to teach the content topics, and understanding how learning occurs through their use, is a substantial portion of the class instructional plan.

VII. EVALUATION and GRADE ASSIGNMENT

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<thead>
<tr>
<th>Homework</th>
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<th>&gt; 90%</th>
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<tr>
<td>Quizzes</td>
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<td>B</td>
<td>80% - 89%</td>
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<td>Tests/Family Math Night</td>
<td>25%</td>
<td>C</td>
<td>70% - 79%</td>
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<td>Final Exam</td>
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VIII. TENTATIVE COURSE SCHEDULE

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<tr>
<th>WEEK</th>
<th>CONTENT</th>
<th>SECTION</th>
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<tbody>
<tr>
<td>1</td>
<td>Pre-assessment; review</td>
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<tr>
<td>2-7</td>
<td>Figures in the Plane</td>
<td>11.1</td>
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<td>Curves and Polygons in the Plane</td>
<td>11.2</td>
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<td>Figures in Space</td>
<td>11.3</td>
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<td>7-12</td>
<td>The Measurement Process</td>
<td>12.1</td>
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<td></td>
<td>Area and Perimeter</td>
<td>12.2</td>
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<td>The Pythagorean Theorem</td>
<td>12.3</td>
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<td>Surface Area and Volume</td>
<td>12.4</td>
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<td>13-15</td>
<td>Rigid Motions and Similarity Transformations</td>
<td>13.1</td>
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<tr>
<td></td>
<td>Patterns and Symmetries</td>
<td>13.2</td>
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IX. CLASS POLICIES

*Academic Integrity/Plagiarism*

University students are expected to conduct themselves in accordance with the highest standards of academic honesty. Academic misconduct for which a student is subject to penalty includes all forms of cheating, such as illicit possession of examinations or examination materials, falsification, forgery, complicity or plagiarism. Plagiarism is the presentation of the work of another as one’s own work. In this class, academic misconduct or complicity in an act of academic misconduct on an assignment or test will result in a grade of “F”.

*Dropping a Class*

I hope that you never find it necessary to drop this or any other class. However, events can sometimes occur that make dropping a course necessary or wise. Please consult with me before you decide to drop to be sure it is the best thing to do. Should dropping the course be the best course of action, you must initiate the process to drop the course by going to the Student Services Center and filling out a course drop form. Just stopping attendance and participation WILL NOT automatically result in your being dropped from the class. Friday, April 10, 2015 is the last day to drop a class with an automatic grade of “W” this term.

*Classroom/professional behavior*

Texas A&M University-Corpus Christi, as an academic community, requires that each individual respect the needs of others to study and learn in a peaceful atmosphere. Under Article III of the Student Code of Conduct, classroom behavior that interferes with either (a) the instructor’s ability to conduct the class or (b) the ability of other students to profit from the instructional program may be considered a breach of the peace and is subject to disciplinary sanction outlined in article VII of the Student Code of Conduct. Students engaging in unacceptable behavior may be instructed to leave the classroom. This prohibition applies to all instructional forums, including classrooms, electronic classrooms, labs, discussion groups, field trips, etc.

*Statement of Civility* Texas A&M University-Corpus Christi has a diverse student population that represents the population of the state. Our goal is to provide you with a high quality educational experience that is free from repression. You are responsible for following the rules of the University, city, state and federal government. We expect that you will behave in a manner that is dignified, respectful and courteous to all people, regardless of sex, ethnic/racial origin, religious background, sexual orientation or disability. Behaviors that infringe on the rights of another individual will not be tolerated.

*Grade Appeals (College of Science and Engineering Version)*

As stated in University Procedure 13.02.99.C2.01, Student Grade Appeal Procedures, a student who believes that he or she has not been held to appropriate academic standards as outlined in the class syllabus, equitable evaluation procedures, or appropriate grading, may appeal the final grade given in the course. The burden of proof is upon the student to demonstrate the appropriateness of the appeal. A student with a complaint about a grade is encouraged to first discuss the matter with
the instructor. For complete details, including the responsibilities of the parties involved in the process and the number of days allowed for completing the steps in the process, see University Procedure 13.02.99.C2.01, Student Grade Appeal Procedures. These documents are accessible through the University Rules website at http://www.tamucc.edu/provost/university_rules/index.html, and the College of Science and Engineering Grade Appeals webpage (http://sci.tamucc.edu/students/GradeAppeal.html). For assistance and/or guidance in the grade appeal process, students may contact the chair or director of the appropriate department or school, the Office of the College of Science and Engineering Dean, or the Office of the Provost.

Disabilities Accommodations

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 believe you have a disability requiring an accommodation, please call or visit Disability Services at (361) 825-5816 in Corpus Christi Hall 116. If you are a returning veteran and are experiencing cognitive and/or physical access issues in the classroom or on campus, please contact the Disability Services office for assistance at (361) 825-5816.

Statement of Academic Continuity

In the event of an unforeseen adverse event, such as a major hurricane and classes could not be held on the campus of Texas A&M University–Corpus Christi; this course would continue through the use of Blackboard and/or email. In addition, the syllabus and class activities may be modified to allow continuation of the course. Ideally, University facilities (i.e., emails, web sites, and Blackboard) will be operational within two days of the closing of the physical campus. However, students need to make certain that the course instructor has a primary and a secondary means of contacting each student.

Given the Family Educational Rights and Privacy Act (FERPA), a student has the right to:

1. **Inspect and review their education records**
   Students can inspect and review their education records within 45 days of the day the University receives a request for access. A student should submit to the registrar, dean, head of the academic department, or other appropriate official, a written request that identifies the record(s) they wish to inspect. The University official will make arrangements for access and notify the student of the time and place where the records may be inspected. If the records are not maintained by the University official to whom the request was submitted, that official shall advise the student of the correct official to whom the request should be addressed.

2. **Request to amend their education records**
   Students can request to amend any of their education records that they believe are inaccurate, misleading, or otherwise in violation of the student’s privacy rights under FERPA. A student who wishes to ask the University to amend a record should write the University official responsible for the record, clearly identify the part of the record the student wants changed, and specify why it should be changed. If the University decides not to amend the record as requested, the University will notify the student in writing of the decision and the student’s
right to a hearing regarding the request for amendment. Additional information regarding the
hearing procedures will be provided to the student when notified of the right to a hearing.

3. **Some control over the disclosure of their education records**

   Students have the right to provide written consent before the University discloses personally
   identifiable information from their education records, except to the extent that FERPA
   authorizes disclosure without consent. The University discloses education records without a
   student’s prior written consent under the FERPA exception for disclosure to school officials
   with legitimate educational interests. A school official is
   - A person employed by the University in an administrative, supervisory, academic or
     research, or support staff position (including law enforcement unit personnel and health
     staff)
   - A person or company with whom the University has contracted as its agent to provide a
     service instead of using University employees or officials (attorney, auditor, or collection
     agent)
   - A person serving on the Board of Trustees; or a student serving on an official committee,
     such as a disciplinary or grievance committee, or assisting another school official in
     performing his or her tasks.
   - A school official has a legitimate educational interest if the official needs to review an
     education record in order to fulfill his or her professional responsibilities for the
     University. Upon request, the University also discloses education records without consent
     to officials of another school in which a student seeks or intends to enroll.

4. **File a complaint if they feel any of these rights have been violated**

   Students can file a complaint with the U.S. Department of Education concerning alleged
   failures by the University to comply with the requirements of FERPA. The name and address
   of the Office that administers FERPA is:
   
   Family Policy Compliance Office  
   U.S. Department of Education  
   400 Maryland Avenue, SW  
   Washington, DC 20202-5901

**X. REFERENCES**


SBEC Technology Standards for Beginning Teachers

http://www.sbec.state.tx.us/SBECOnline/standtest/standards/techapps_allbegtch.pdf


Texas Essential Knowledge and Skills for Technology Applications

http://www.tea.state.tx.us/rules/tac/chapter126/index.html