BRIEF CALCULUS 2016-2017

Teacher: Joycelyn Craft   **Room:** C106   **Phone**: (480) 424-8052

Email: craft.joycelyn@cusd.80.com

Students will have access to a google drive account. Students will need a "professional" gmail account and will share that with the instructor to gain access to the files uploaded to the drive for their use. Students should use the cusd80 email above to communicate with the instructor rather than the gmail account used to establish the drive.

Course Description:
Pre-calculus includes topics from college algebra and trigonometry. Students may elect to take this course for dual credit.

Prerequisite:
Completion of Algebra 2 with complete mastery is required. You need to understand that this is a college-level course and that the standards are high. Be sure that you are ready to work at a high level all year. This course combines two year- long courses into one year. For that reason there will be no class time allotted for review of material covered in Algebra 2.

Dual Credit:
ACP Erie in conjunction with Chandler Gilbert Community College offers high school students dual credit opportunities. The normal Maricopa Community College tuition applies. Registration for dual enrollment will be in August. Students will need to pass the Maricopa Community College placement exam in order to be eligible for dual enrollment. The placement exam will be given during the month of August.

Pre-Calculus Competences 152 and 182 (Dual Credit offered through Chandler-Gilbert Community College) Fall Semester

MAT 152. (3 credits) Analysis and interpretation of the behavior and nature of functions including polynomial, rational, e xponential, logarithmic, power, absolute value, and piecewise-defined functions; systems of equations, modeling and solving real world problems. Additional topics may include matrices, combinatorics, sequences and series, and conics.

Math 182. (3 credits)   A study of measures of angles, properties of graphs of trigonometric functions, fundamental identities, addition and half-angle formulas, inverse trigonometric functions, solutions of trigonometric equations, complex numbers and properties of triangle solution.

Calclulus with Analytic Geometry I. (4 credits) Limits, continuity, differential and integral calculus of functions of one variable with their applications. Calculus pulls together many of the concepts the students have studied in previous courses, and it also helps them to see the relevance of the material they were taught prior to Calculus

It is very important that you check with the college of your choice to see what their specific requirements are for determining credit.

Textbook: <u>Advanced Mathematical Concepts Pre-calculus with Applications</u> by Glencoe McGraw-Hill.

Supplementary Resources:

   Larson, Ron. Precalculus with Limits. 3rd Edition. Boston, MA. Cengage Learning.

   Blitzer, Robert. Precalculus. 5th Edition. 2014. Pearson Education, Inc.

Supplies
   Graphing Calculator (TI – 84 plus or TI-89 recommended)
   Graph Composition Book: 2 for assignments; 1 for personal resource book
   Pencils, Pens (red and other colors for color coding) & Highlighters (at least 3 colors)
   Sticky notes (small in two colors)
   3-Ring Binder with a section for Notes and a section for Warm Ups.

Attendance. It is essential that you come to class each day and that you are on time. When you are absent, it is <u>your responsibility</u> to find out what you missed, including copying notes or class work, and completing homework. You can ask a reliable classmate for this, check the folder on the class bulletin board, or check on my webpage. Make-up work is given one class period for each day a student is gone from class. If you miss the day of a test or quiz, you will take it upon your return. If you are leaving early for sports or a field trip, you must pick up your work prior to your absence.

Tardies. Students must be **in their seats** when the tardy bell rings or they will be considered tardy. Students will be assigned lunch detention after 3 tardies.

Cheating. Cheating means, but is not limited to: copying homework, tests and quizzes or using electronic devices during tests or quizzes. These behaviors are unacceptable. Please DO NOT do it. Students will receive a 0 for the assignment/test/quiz, have to call their parents/guardians, and be written a conduct referral.

Discipline. Minor infractions (dress code, food, drink, etc) will result in a lunch detention. Major infractions or repeated disruption will result in a conduct referral. This is not something that I would expect from a calculus student. Respect yourself and respect the education of those around you by participating and cooperating in a positive manner.

Electronics. Do not have your phone out unless for authorized instructional use. I will inform you when it is okay to have your phone out.

Extra Help: _I feel strongly about helping each of my students succeed_. Please ask questions during class when you don't understand something. You are responsible to come in for help when you do not understand something. I am available for tutoring _____ afterschool until 3:30 pm. I am also available by appointment during Success and Club Time.

DO NOT PROCRASTINATE WHEN SEEKING HELP IN THIS COURSE…
IT MOVES AT WARP SPEED!

Grading Scale: A = 90-100%;   B = 80-89%;   C = 70-79%;   D =60-69%;   F = 0-59%

Do not expect rounding. In rare instances *if all opportunities for grade improvement have been utilized by the student*, grades may be rounded a partial percent.   i.e.   A student has 89.6% in the class AND has completed all test corrections and other provided opportunities without missing work, the grade may be rounded up to 90%.

Semester Cumulative
80% Assessments:
Unit exams (or half unit exams):
- Tests for AB Calc (spring quarter) may be corrected to earn back 1/3 of the points. These tests may NEVER leave the classroom (College Board Policy).

Quizzes: Quizzes: Formula quizzes and problems quizzes.
- First semester quizzes may be retaken (two per quarter with remediations completed prior to making an appointment). These do NOT include the formula quizzes.

10% Daily Work:
Daily work grades: Based upon *completion*, checked daily, scores entered weekly.
Submitted work; occasionally assignments may be collected and graded for accuracy.

10% Assignments:
Warm-Ups and other work collected assignments: graded upon *accuracy*.
Personal Resource Book Checks: graded according to a rubric.

Students will receive one emergency late pass per quarter for assignments/dailywork. This gives the student 24 hours to submit an assignment of their choice. This may not be used during the last week of the quarter.

Semester Grade (the one that appears on the transcript)
80% Semester Cumulative + 20% Semester Exam

Parent Communication: Please note that I put a premium on the time spent with students in class, so I may not return messages mid-day. However, I will return them before or after school as soon as time permits. If you have any concerns or questions, please do not hesitate to ask. I look forward to working with you. ☺

SchoolWires Site: Class blog and a page with useful links or attachments for each class. **You may also sign up to receive E-alerts email blasts. My blog is updated daily with class updates and reminders. I do not send out an e-alert each day just for big reminders and helpful information.**

Infinite Campus (grades): This site has new capabilities, in order to benefit from them, you will need to sign up for your parent portal that is separate from the student portal. There will be opportunities before and after school if you need assistance.

Email: This is often the best way to reach me; I will reply within 24 business hours.
craft.joycelyn@cusd80.com

<u>Phone:</u> 480-424-8052 I can return calls when I am not teaching, sponsoring math club, in meetings, or holding office hours. I will endeavor to do so in a timely manner. Please note that I cannot call long distance from my work phone; be sure to give me a local number if this is your preferred form of contact.

Teaching Strategies

Learning by Discovery. I like to introduce each unit with a discovery exercise. I think that exploration and discovery are great ways for students to learn because they have more ownership in the material being covered than they have from a traditional lecture approach. It also gives them a chance to discuss the concepts with other students in the class. The discovery lessons are done in groups of two or three students. We do discovery exercises on limits, local linearity, meaning of a derivative, differentiation rules, relationships between the function and the first and second derivatives, the Fundamental Theorems of Calculus, and the average value of a function. In this accelerated course, some of the discovery lessons may be taught directly or assigned as homework for later class discussion. ***The abbreviated time period will significantly impact the method of lesson delivery.***

Graphing Calculator. Many of the discovery exercises rely heavily on the use of the graphing calculator. The calculator helps students develop a visual understanding of the material that they would not otherwise have.

My students use the graphing calculator almost every day in class (after the first few weeks of no calculator material) and also on homework. However, many homework problems and about half of the problems on quizzes and tests are done without the use of the graphing calculator. In order to master conceptual ideas, working without a calculator is necessary. However, graphing calculators can solve previously unsolvable problems using numerical methods and greatly speed up the solving of routine problems. , I feel that it is very important for students to have practice working problems both ways. We spend time in class discussions talking about the types of questions that they must know how to work *with* their calculators and the types of questions that they must know how to work *without* their calculators. We also discuss the techniques needed to use the calculator most efficiently (storing functions in the $y =$ screen, storing values that will be used later in the problem, etc.).

Rule of Four. I give my students many opportunities to work problems presented in a variety of ways: graphical, numerical, analytical, and verbal. Many of the problems in my primary textbook are written with an analytical representation so I frequently supplement these problems with problems giving a graph or tabular data. Students are frequently given word problems in which they have the opportunity to apply the concepts they have learned to a real-world situation. Students are often asked for verbal explanations, both oral and written, to give them the opportunity to communicate their work and their reasoning in words. They are asked to discuss the meaning of their answers, particularly when working related rates problems, optimization problems, and applications of integration problems. I also ask them to discuss the steps they have used to arrive at their answers. They have additional opportunities for discussion when they work in small groups on the discovery exercises and when they present homework problems to the entire class.

Justification of Answers. I ask my students to justify their answers on homework, quizzes, and tests, and I prefer that they write the justifications in sentences. We talk a lot about the amount of work they need to show and about the correct way to justify their work on various types of problems.

Homework. My students have homework each night, usually requiring about 45 minutes of their time. In order to cover all of the Pre-Calculus AND Calculus AB topics, we move fairly quickly through each chapter; it is very important that students do their homework each night so that they gain the maximum benefit from the homework discussion that occurs the next day in class.

Chandler Gilbert Community College required information.
STATEMENT REGARDING OUTCOMES AND ASSESSMENT
The faculty and programs at CGCC are dedicated to effective teaching and successful learning with emphasis in the following areas: communication, critical thinking, literacy, and personal development. Periodically, students will participate in formal and informal assessment activities that will help faculty improve programs and teaching strategies. These activities are designed to facilitate student growth in whatever combination of the above outcomes applies to a course.

STATEMENT REGARDING STUDENTS WITH DISABILITIES

Students with disabilities are required to register for services in the Disability Resources and Services (DRS) office in the Student Center at the beginning of the semester. Do not wait to visit the DRS office if you want support with any CGCC classes. The DRS office will meet with you to determine accommodations based on appropriate documentation. Therefore, faculty members are not authorized to provide or approve any accommodations for students in this class without written instructions from the DRS office. This must be on file before any accommodation will be provided. You can contact the DRS office at (480) 857-5188.

INFORMATION ON LEARNING CENTER
The CGCC Learning Center's mission is to support students' academic learning by providing free tutoring and resources to reinforce and supplement classroom instruction and to assist CGCC students to achieve academic success. All Learning Center services are free to students currently enrolled at Chandler-Gilbert Community College. At the Pecos Campus, the Learning Center is located on the second floor of the Library, rooms LIB227, LIB228, LIB229 and LIB237. At the Williams Campus, the Learning Center is located in Bridget Hall, rooms BRID114 and BRID115. The Learning Center also provides instructional support resources in the form of videotapes, software, and print materials. For a schedule of tutoring hours, additional information, or assistance, students should contact the Learning Center at (480) 732-7231, or visit our website at http://www.cgc.edu/lc .

STATEMENT CONCERNING PLAGIARISM
Plagiarism is defined as presenting the work of another as one's own. More than four consecutive words from a source other than the writer constitute plagiarism when the source is not clearly identified in appropriate documentation format.

From the *CGCC Student Handbook*:
"Plagiarism includes, but is not limited to, the use of paraphrase or direct quotation, of the published or unpublished work of another person without full and clear acknowledgement. It also includes the unacknowledged use of materials prepared by another person or agency engaged in the selling of term papers or other academic materials."

Keep this in your notebook for future reference. Feel free to contact me with any questions you might have!
You and I have the same goal – That you are successful in this class!

Arizona College Preparatory- Erie
Strive for the impossible and be extraordinary!