**Math 28**

1. **Course Description**
   * This course covers the fundamentals of real numbers, pattern recognition and generalization, graphs and functions, basics of exponents, and solving of proportions and equations. It develops the relationship between realistic applications and quantitative reasoning. This course is a prerequisite for MATH 102; completion of both MATH 28 and MATH 102 can serve as the equivalent to the prerequisite for BTEC 180, BUS 204, MATH 103, SOC 104, SOC 104H, PSYC 104, or PSYC 104H. This course is not a prerequisite for CHEM 140, MATH 105, MATH 115, MATH 126, or any college or university calculus course. (Formerly MATH 52; Materials Fee: $20.00)
2. **Topics Covered**
   * This course covers the fundamentals of mathematics with an emphasis on patterns, problem solving, and critical thinking. The course emphasizes number sense and non-algebraic methods for solving problems. Basic operations (addition, subtraction, multiplication, and division) are expanded on and both traditional and more efficient algorithms are covered. The course continues with ratio and proportion with connections to percentages, unit conversions, slope, and applications. It concludes by connecting all the concepts into modeling using lines, interpreting points on graphs, as well as solving linear equations using traditional algebra as well as other methods.
3. **What to expect?**
   * Costs: Materials are provided locally and this keeps the overall cost of the course to the $20 materials fee. The only other cost is a calculator, Casio FX-300 ES Plus; a limited number are available to be temporarily checked out to students for the term.
   * Time: You should expect to have 5 hours in class each week and an additional 7 hours per week (on average) outside of class.
   * Homework: Homework is done on paper, not online, and all solutions are provided for students to check their work and better understand the concepts.
   * Tests: Tests are paper based in class and most teachers have an in-class and take-home portion of the exam.
   * Technology: The class requires a scientific calculator and a limited number of Casio FX-300 ES Plus calculators are available to be checked out during the term.
   * Format: The course is taught as a combined lecture/lab format where there is time in class to work through sample problems together.
   * Grading: The lecture and lab components are combined so the lab portion will not have a separate grade. The course may be taken with a letter grade or Pass/No Pass.
4. **Who should enroll?**
   * This course is the starting point for a sequence moving students into Math 102 as their terminal courses could be the last math class many students need to graduate and/or transfer. This course is recommended for students who need a statistics or liberal arts course and/or students who have struggled with algebra but need a transfer level course. Students who are majoring in STEM or Business (or want to be an elementary school teacher in the future) should take a different course.
   * After this course, you’ll be eligible for: Math 30/64, Math 32/64, or Math 102.
5. **What prior knowledge students need to know to be successful?**
   * Some arithmetic knowledge
     + Knowing basic algorithms for operations (+, – , ×, ÷) as well as knowing single digit addition and multiplication facts.
     + Use of a scientific calculator is helpful