Catalog Description: The NCBO supports students in developing skills, strategies, and reasoning needed to succeed in mathematics, including communication and appropriate use of technology. Topics include the study of numeracy and the real number system; algebraic concepts, notation, and reasoning; quantitative relationships; mathematical models; and problem solving.

Lecture hours = 0, Lab hours = 1

Prerequisites: Placement Examination or Advising

Co-Requisite: Math 1332/1342

Semester Credit Hours: 1
Lecture Hours per Week: 0
Lab Hours per Week: 1
Contact Hours per Semester: 16
State Approval Code: 32.0104.53 19

Class Section Meeting Time:

Core Components and Related College Student Learning Outcomes
This course counts as part of the academic requirements of the Panola College Core Curriculum and an Associate of Arts or Associate of Science degree. ☐ Yes ☑ No: If no, skip to Instructional Goals.

The items below marked with an X reflect the state-mandated outcomes for this course IF this is a CORE course:

☐ Critical Thinking Skills – to include creative thinking, innovation, inquiry and analysis, evaluation and syntheses of information
  ☐ CT1: Generate and communicate ideas by combining, changing, or reapplying existing information
  ☐ CT2: Gather and assess information relevant to a question
  ☐ CT3: Analyze, evaluate, and synthesize information

☐ Communication Skills – to include effective development, interpretation, and expression of ideas through written, oral, and visual communication
  ☐ CS1: Develop, interpret, and express ideas through written communication
  ☐ CS2: Develop, interpret, and express ideas through oral communication
  ☐ CS3: Develop, interpret, and express ideas through visual communication
Empirical and Quantitative Skills – to include the manipulation and analysis of numerical data or observable facts resulting in informed conclusions
☐ EQS1: Manipulate and analyze numerical data and arrive at an informed conclusion
☐ EQS2: Manipulate and analyze observable facts and arrive at an informed conclusion

Teamwork – to include the ability to consider different points of view and to work effectively with others to support a shared purpose or goal
☐ TW1: Integrate different viewpoints as a member of a team
☐ TW2: Work with others to support and accomplish a shared goal

Personal Responsibility – to include the ability to connect choices, actions, and consequences to ethical decision-making
☐ PR1: Evaluate choices and actions and relate consequences to decision-making

Social Responsibility – to include intercultural competence, knowledge of civic responsibility, and the ability to engage effectively in regional, national, and global communities
☐ SR1: Demonstrate intercultural competence
☐ SR2: Identify civic responsibility
☐ SR3: Engage in regional, national, and global communities

Instructional Goals and Purposes:
The purpose of this course is to increase academic proficiency in expression of mathematical solutions, mathematical reasoning, and mathematical understanding.

Learning Outcomes: (from the ACGM catalog)
After studying the material presented in course, the student should be able to:

1. Use appropriate symbolic notation and vocabulary to communicate, interpret, and explain mathematical concepts.
2. Define, represent, and perform operations on real numbers, applying numeric reasoning to investigate and describe quantitative relationships and solve real world problems in a variety of contexts.
3. Use algebraic reasoning to solve problems that require ratios, rates, percentages, and proportions in a variety of contexts using multiple representations.
4. Apply algebraic reasoning to manipulate expressions and equations to solve real world problems.
5. Use graphs, tables, and technology to analyze, interpret, and compare data sets.
6. Construct and use mathematical models in verbal, algebraic, graphical, and tabular form to solve problems from a variety of contexts and to make predictions and decisions.

Course Content:
Students in all sections of this course will learn how to:

1. Identify variables in context.
2. Classify data as a type of number.
3. Evaluate exponents and square roots.
4. Translate between scientific notation and standard form and vice versa.
5. Round decimals.
6. Write fractions in lowest term and apply operations to fractions.
7. Apply operations to decimals.
8. Convert between decimals, fractions, and percentages.
9. Find the percentage of a number.
10. Solve consumer math problems involving percentages.
11. Use a Cartesian coordinate plane to plot ordered pairs as points.
12. Interpret basic statistical graphs.
13. Define and identify terms used with probability: event, outcome, empirical probability, theoretical probability, etc.
14. Calculate the probability of a simple event.
15. Use tree diagrams to calculate the probability of a multi-stage experiment.
16. Use the Fundamental Counting Principle to determine the number of outcomes in an experiment and to calculate the probability of an event.
17. Calculate mean, median, mode, mid-range, and range.
18. Apply the order of operations.
19. Evaluate expressions and formulas.
20. Find the area of a rectangle.
21. Interpret inequality notation.
22. Find and interpret slope.
23. Find and interpret the y-intercept of a line.
24. Find values from a linear equation or graph.
25. Graph a linear equation.
26. Find and interpret a linear model \((y = mx + b)\).

**Methods of Instruction/Course Format/Delivery:**

Methods of Instruction/Course Format/Delivery: Methods employed will include Lecture/demonstration, discussion, problem solving, analysis, and reading assignments. Homework will be assigned. Faculty may choose from but are not limited to, the following methods of instruction:

1. Lecture
2. Discussion
3. Internet
4. Video
5. Television
6. Demonstrations
7. Field trips
8. Collaboration
9. Readings

**Major Assignments / Assessments:**
The following items will be assigned and assessed during the semester and used to calculate the student's final grade.

**Assessment(s):**

1. Individual Study Plan created from diagnostics
Course Grade:

Assignment Weights
Attendance/Participation 10%
Completion of Study Plan 90%

Grades for the Course will be assigned as follows:

Completion of the study plan, attendance, participation, and progress in MATH1332 or MATH 1342. The grade assigned will either be Pass or Fail.

70-100% Pass
0-69% Fail

Students must achieve an average grade of C (70%) or better to pass out of NCBM 0101.

Texts, Materials, and Supplies:
The text and resources for this course are provided by the NROC Developmental Mathematics Program. Panola College is a member of NROC; use of this program is free to the students.

Other materials and supplies
1. Consistent access to computer
2. Canvas (Provided by Panola College)
4. Scientific Calculator
5. Ear phones or ear buds

Other:
- For current texts and materials, use the following link to access bookstore listings: [http://www.panolacollegestore.com](http://www.panolacollegestore.com)
- For testing services, use the following link: [http://www.panola.edu/elearning/testing.html](http://www.panola.edu/elearning/testing.html)
- If any student in this class has special classroom or testing needs because of a physical learning or emotional condition, please contact the ADA Student Coordinator in Support Services located in the Administration Building or go to [http://www.panola.edu/student-success/disability-support-services/](http://www.panola.edu/student-success/disability-support-services/) for more information.
- Withdrawing from a course is the student’s responsibility. Students who do not attend class and who do not withdraw will receive the grade earned for the course.