



## Course Syllabus

### NCBM 0102 – Non Course Based Mathematics

#### Catalog Description:

The Non-Course-Based Option (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:

**Alternate Operations During Campus Closure:** In the event of an emergency or announced campus closure due to a natural disaster or pandemic, it may be necessary for Panola College to move to altered operations. During this time, Panola College may opt to continue delivery of instruction through methods that include, but are not limited to: online learning management system (CANVAS), online conferencing, email messaging, and/or an alternate schedule. It is the responsibility of the student to monitor Panola College's website ([www.panola.edu](http://www.panola.edu)) for instructions about continuing courses remotely, CANVAS for each class for course-specific communication, and Panola College email for important general information.

#### Artificial Intelligence (AI) Course Policy:

There are situations throughout the course where you may be permitted to use artificial intelligence (AI) tools to aide in further understanding of mathematical concepts. However, AI tools may not be used for any graded assignments including but not limited to exams, quizzes, and projects. Use of any AI-generated content in this course without the instructor's consent qualifies as academic dishonesty and violates Panola College's standards of academic integrity.

#### 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

#### Instructional Goals and Purposes:

The purpose of this course is to increase academic proficiency in expression of mathematical solutions, mathematical reasoning, and mathematical understanding. This NCBM lab is taken along with a credit-level mathematics course—MATH 1332-Quantitative Reasoning or MATH 1342-Elementary Statistical Methods. It is designed to support the development of math skills needed to successfully complete the credit-level course.

**Technical Skill Requirements:**

- Use a web browser
- Access and use Canvas Learning Management System (LMS)
- Use email within Canvas LMS to communicate with instructor
- Send an email attachment
- Download appropriate files
- Upload files to Canvas LMS
- Access and use online lab software (manage account name and password)
- Use a calculator

**Learning Outcomes:** (from the ACGM catalog; aligned with Texas College and Career Readiness Standards for Mathematics)

After studying the material presented in course, the student will 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 be able 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:**

This course may be offered in a computer lab in face-to-face or hybrid format or may be offered online. In the event of an emergency where face-to-face instruction cannot be provided, the course materials and activities may be moved to an online format for course completion.

Methods of instruction will include activities needed to support individual skill development. Online homework will be assigned in online lab software. The student is expected to work at least 16 hours per semester in the online lab software.

**Major Assignments / Assessments:**

The following items will be assigned and assessed during the semester and will be used to calculate the final grade for the course.

## Assignments:

- Online assignments in lab software which is individualized based on diagnostic testing
- Supplemental assignments to support achievement in corequisite credit-level class as needed

**Course Grade:**

For developmental courses like this lab, a grade of C (70%) or higher must be achieved for course credit. This course requires at least one hour of study time per week.

## Assignment Weight:

- Completion of individual Study Plan – 100%
- OR**
- Grade of C or higher in corequisite credit-level course – 100%

## Grades for the course will be assigned as follows:

- 70-100% = Pass
- Below 70% = Fail

A grade of Pass for this lab course will be assigned if the student achieves a grade of C or higher in the corequisite credit-level class.

**TSI Completion Requirements for NCBM 0102**

To achieve TSI Met status students must complete the Study Plan with a 70% mastery of objectives assigned in the Plan. Students who achieve a grade of C or higher in the corequisite credit-level math course will automatically achieve TSI Met status.

**Texts, Materials, and Supplies:**

- Panola College EdReady (This is included with registration of the course.)
- Access to Canvas LMS (Provided by Panola College)
- Desmos Scientific Calculator (no purchase necessary)
- Other materials as assigned by the instructor

**Other:**

- Courses conducted via video conferencing may be recorded and shared for instructional purposes by the instructor.
- For current texts and materials, use the following link to access bookstore listings: <https://www.panolacollegestore.com>
- For testing services, use the following link: <https://www.panola.edu/student-services/student-support/academic-testing-center>
- 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 Charles C. Matthews Student Center or go to <https://www.panola.edu/student-services/student-support/disability-support-services> for more information.

- Panola College welcomes pregnant and parenting students as a part of the student body. This institution is committed to providing support and adaptations for a successful educational experience for pregnant and parenting students. Students experiencing a need for accommodations related to pregnancy or parenting will find a Pregnancy and Parenting Accommodations Request form in *The Pathfinder* or may request the form from the course instructor.
- 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.
- Student Handbook, *The Pathfinder*: <https://www.panola.edu/> (located at the bottom under students)