

Angelina College
Science and Mathematics Division
NCBM0125
Instructional Syllabus – Spring 2019

I. BASIC COURSE INFORMATION

A. Mathematics Special Developmental Education: Non-Course Competency-Based Option (NCBO) NCBM 0125.

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 problems solving. This NCBM cannot be used toward credit for an associate degree and is not intended for transfer to a senior college.

Requirements: This course is paired with MATH 0325.

Eligibility: TSI assessment score 330 - 336 and DE Level 4.

B. Intended Audience - The intended audience is any student needing remediation in topics covered in MATH 0325, while the student is enrolled in Fundamentals of Mathematics (MATH 0325).

C. Instructor: Liz Scott

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Office Hours: Posted on office door.

II. INTENDED STUDENT OUTCOMES

A. Core Objectives Required for this Course

1. Critical Thinking: to include creative thinking, innovation, inquiry, and analysis, evaluation and synthesis of information.
2. Communication: to include effective development, interpretation and expression of ideas through written, oral and visual communication.
3. Empirical and Quantitative Skills: to include the manipulation and analysis of numerical data or observable facts resulting in informed conclusions

B. Learning Outcomes -

Upon successful completion of this course, students will:

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.

III. ASSESSMENT MEASURES OF STUDENT LEARNING OUTCOMES

A. Assessments for the Learning Outcomes –

The learning outcomes will be assessed through embedded test/quiz questions.

IV. INSTRUCTIONAL PROCEDURES

A. Methodologies Common to All Sections

This course may be taught using a combination of online lecture videos, discussions, and practice exercises.

B. Methodologies Determined by the Instructor

Methodologies are the same as part A (above).

V. COURSE REQUIREMENTS AND POLICIES

A. Required Textbooks, Materials, and Equipment

1. This course requires the Foundations Co-requisite packet.

If you do not have your packet by the end of the second week of the semester, you may be dropped from the course.

2. Calculator, a TI30-XS is recommended.

Note: This course does not require an access code for MyLabsPlus from Pearson.

B. Assignments

1. Specific assignments required for all students.
2. Appropriate due dates, schedules, deadlines, etc. as determined by the instructor.
3. Additional specific assignments, which may be required of students by the instructor.

C. Course Policies - (This course conforms to the policies of Angelina College as stated in the Angelina College Handbook.)

1. Academic Assistance

Educational Accommodations - If you have a disability (as cited in Section 504 of the Rehabilitation Act of 1973 or Title II of the Americans with Disabilities Act of 1990) that may affect your participation in this class, you may fill out the Educational Accommodations application within your AC Portal, under the “Student Services” tab. A Student Success team member will contact you once the application is received. At a post-secondary institution, you must self-identify as a person with a disability in order to receive services; for questions regarding the application process you can visit the Office of Student Success and Inclusion in the Student Center (Room 200) or email access@angelina.edu. To report any complaints related to accommodations, you should contact Annie Allen, Director of Student Success & Inclusion, in Room 200 of the Student Center. You may also contact Ms. Allen by calling (936) 633-4509 or by emailing aallen@angelina.edu. To report discrimination of any type, contact Steve Hudman, Dean of Student Affairs, at (936) 633-5292 or shudman@angelina.edu.

2. **Attendance** – Attendance is required as per Angelina College Policy and will be recorded everyday. Any student with two (2) cumulative absences may be dropped from the class. **If you are dropped from NCBM 0125, then you will also be dropped from your MATH 0325 course.** Records will be turned in to the academic dean at the end of the semester. Do not assume that non-attendance in class will always result in an instructor drop. You must officially drop a class or risk receiving an F.

A student may also be dropped due to lack of participation. A student is considered to be participating if they are (1) actively engaged during the entire class period, (2) present, on

time and prepared for class (required work, calculator, etc.), and (3) a consistent, productive member of their class/ and or group at all times

3. Additional Policies Established by the Individual Instructor –

- a. Class participation, questions, and discussion are a requirement for this course.
- b. Students must have their instructor's written permission to use any type of recording device.
- c. **CELL PHONES OR OTHER ELECTRONIC DEVICES**
 - i. Pagers, cellular phones, earphones, smart watches and similar electronic devices should be silent or off and **out of sight** during the entire class period. Note: Out of site means in your purse, backpack, or pocket. A student who fails to follow this rule will be dropped after a written warning. The warning will be sent via your school email account.
 - ii. No electronic devices, other than approved calculators, may be used during any quiz or test. These prohibited electronic devices may include, but not be limited to: cell phones or smart phones, smart watches or other electronic visual aids, audio players, recorders, tablets, notebooks, Google glass, or any other similar devices, any digital device that can be used to record, transmit, receive, or play back audio, photographic, text, or video content.
 - iii. Failure to follow this rule may result in the student receiving a grade of zero on the quiz or test. If the student receives a test score of zero due to failure to follow this rule, the zero test score cannot be replaced by the final exam.
- d. Cheating on tests is not tolerated as per Angelina College policy and may result in expulsion from the course. Plagiarism is not tolerated and will result in a zero for any assignment in which it is detected.
- e. Visitors, including children, are not allowed in classrooms.

VI. COURSE CONTENT

A. Required Content/Topics

- **Numeracy:** *Students will develop number sense and the ability to apply concepts of numeracy to investigate and describe quantitative relationships and solve real-world problems in a variety of contexts.*
- **Proportional Reasoning:** *Students will use proportional reasoning to solve problems that require ratios, rates, proportions, and scaling.*
- **Algebraic Competence, Reasoning, Modeling:** *Students will transition from specific and numeric to general and abstract reasoning using the language and structure of algebra to investigate, represent, and solve problems.*
- **Assessing Risk (Probabilistic Reasoning):** *Students will understand and critically evaluate statements involving risk and arguments based on probability that appear in the popular media, especially in presenting medical information.*
- **Personal Finance:** *Students will understand, interpret and make decisions based on financial information that is commonly presented to consumers.*
- **Civic Life:** *Students will understand that quantitative information presented in the media and by other entities can sometimes be useful and sometimes be misleading.*

VII. EVALUATION AND GRADING

- The course grade will be determined by taking the total points earned and dividing by the total possible number of points a student can earn. Grades will be rounded to the nearest unit, and assigned a letter grade based on the following scale:

Average Grade	Letter Grade
90-100	A
80-89	B
70-79	C
69 & below	F or IP*

* An "IP" grade indicates the student has earned less than a "C" grade in a developmental course, but has demonstrated a good faith effort in terms of course meeting attendance, assignment completion, and engagement in classroom activities. The student must repeat the developmental course in which an "IP" grade was assigned and earn a passing grade in the course to progress to college-level courses or the next developmental course. The student may also progress by re-taking the Texas Success Initiative (TSI) examination and earning a passing score at any time.

- The grade for this course will be based on the following percentages.

In-class work and/or quizzes **40%**

Participation **30%**

Each day is worth 2 points. If you are absent, you cannot earn points for participation.

Attendance **30%**

Each class day is worth 2 points.

No make-ups for quizzes or in-class assignments.

VIII. SYLLABUS MODIFICATION

The instructor may modify the provisions of the syllabus to meet individual class needs by informing the class in advance as to the changes being made.

Week	Date	Assignments
1	1/15/19	Lesson 1.A Understanding the base-ten place value system Lesson 1.C Performing basic unit conversion (US customary system)
	1/17/19	Lesson 2.B Rounding, writing powers of ten in exponential form
2	1/22/19	Lesson 2.C Writing ratios, converting fractions to decimals and percentages Lesson 2.D Writing ratios and unit rates
	1/24/19	Lesson 3.B Student success focus (seeking help), reviewing place value, fractions, and percentages Lesson 3.C Converting percentages to fractions and decimals, misconceptions about percentages

3	1/29/19	Lesson 3.D Converting percentages to fractions and decimals
	1/31/19	Lesson 4.C Reading line graphs, understanding relative change Lesson 4.D Reading bar graphs
4	2/5/19	Review for Exam 1
	2/7/19	Review for Exam 1
5	2/12/19	Lesson 5.B Reading frequency tables
	2/14/19	Lesson 5.D Reading dotplots
6	2/19/19	Lesson 6.A Calculating mean, median, and mode Lesson 6.B Calculating measures of central tendency
	2/21/19	Lesson 6.D Reading boxplots and finding the 5-number summary
7	2/26/19	Lesson 8.A Converting fractions and decimals, calculating a percent of a percent Lesson 8.B Calculating percentages of large values, evaluating risk
	2/28/19	Lesson 8.C Calculating probability, chance, and likelihood
8	3/5/19	Lesson 9.A (optional) Completing two-way tables, using two-way tables to calculate percentages
	3/7/19	Lesson 9.B Comparing percentages
9	3/19/19	Review for Exam 2
	3/21/19	Lesson 9.C Determining percentages from two-way tables Lesson 9.D (optional) Interpreting false-positive and false-negative results from two-way tables
10	3/26/19	Lesson 10.A Calculating population densities as unit rates
	3/28/19	Lesson 12.A Creating conversion factors Lesson 12.B (#3 only) Writing conversion factors and performing dimensional analysis
11	4/2/19	Lesson 12.C Applying dimensional analysis to contextual situations
	4/4/19	Lesson 14.C Solving multi-step equations
12	4/9/19	Review for Exam 3
	4/11/19	Lesson 15.B (Practice only-#2) Solving proportions Lesson 15.C (#1 and 4 only)

		Solving equations using the distributive property and combining like terms
13	4/16/19	Lesson 15.D (optional) Solving equations that have variables on both sides Lesson 15.E Applications of proportions to similar triangles and scaling problems
	4/18/19	Lesson 13.C Analyzing the effect of changing values of one variable while other variables remain fixed in the compound interest formula
14	4/23/19	Lesson 13.D (optional) Solving for principle in the compound interest formula, evaluating the order of operations with powers and radicals Backing out the Sales Tax (handout-not in packet)
	4/25/19	Review for Exam 4
15	4/30/19	Review for Final Exam
	5/2/19	Review for Final Exam
		Final Exam