

General Education Course Objectives and Learning Outcomes

Course Name: College Math

Course Number: MATH 1003

Submitted by: Leslie Bain

Department: Mathematics

Course Facilitator (Along with the department head, this faculty member helps facilitate discussions of assessment results and course commonalities among all instructors who teach the course): Leslie Bain

COMMON COURSE OBJECTIVES AND STUDENT LEARNING OUTCOMES THAT ARE OR WILL BE LISTED ON THE SYLLABUS OF EVERY SECTION OF THIS COURSE.

These must include the appropriate general education goal(s) and their associated learning outcomes (see below), as per the faculty handbook section on syllabi.

<i>Course objectives:</i>	MATH 1003 is a quantitative literacy course that focuses upon the mathematics of contemporary life. The course is designed to strengthen the ability to apply quantitative reasoning skills.
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<i>Student learning outcomes:</i>	Upon satisfactory completion of the course, students will be able to: 1) Create and analyze graphical representations of data. 2) Use statistics appropriately to determine characteristics and values for normally distributed, symmetric, and skewed data (ranges, measures of center, etc.) 3) Understand and calculate the effects of interest on savings and expenditures. 4) Use numerical relationships to calculate various representations of a value. 5) Make informed mathematical conclusions from studies, surveys, and polls. 6) Understand the concepts of and calculate values of probability and counting.
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ADHE ACTS INFORMATION FOR THIS COURSE (IF APPROPRIATE)

<i>ACTS Course number:</i>	MATH 1113
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<i>Copy the ACTS course objectives and learning outcomes:</i>	General Description: Comprehensive mathematics course designed for general education core and for degrees not requiring college algebra. A strong emphasis should be placed on critical thinking, mathematical modeling, and technology. The majority of the course must include topics from general concepts of functions. Projects, group work, reading and writing should be included. Expected Student Learning Outcomes: Student performances include 1)Identifying problem-solving strategies and applying them to contemporary everyday problems both in work and in personal lives, 2)Analyzing reports from media to determine completeness and accuracy noting assumptions both stated and unstated, 3)Critiquing public consumer and political information for better understanding, completeness, and accuracy.
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WHICH ATU GENERAL EDUCATION GOALS DOES THIS COURSE FULFILL?

(Note: Courses will be assessed via the GE goal rubrics listed on the GE assessment webpage. Every goal has a separate assessment based on the learning objectives listed below.)

- Communicate effectively**
 - Written communication**
 Learning Outcomes:
 1. Present written thoughts in a cohesive manner
 2. Synthesize information into a collective argument
 3. Use formal grammar and mechanics
 - Oral communication**
 Learning Outcomes:
 1. Verbally present thoughts in an organized manner
 2. Speak with confidence on a variety of subjects
 3. Adapt to multiple audiences including a professional audience

Apply scientific and quantitative reasoning

- Scientific reasoning** --- recognize the power of the scientific process through its ability to provide ways to experimentally verify and predict natural phenomena

Learning Outcomes:

1. Identify hypothesis,
2. Classify relevant variables
3. Evaluate experimental design
4. Formulate reasonable explanations of natural phenomena based on observations of both quantitative and qualitative data

- Quantitative reasoning** --- use mathematical formulae or processes in real world situations

Learning Outcomes:

1. Perform a quantitative analysis of a situation
2. Make a decision based upon the outcome of a quantitative analysis of a situation
3. Analyze information presented in a graphical format
4. Create a mathematical model of a real world situation

Apply the value of the arts and humanities

Learning Outcomes:

1. Identify ideas represented in art, music, theatre, film, literature, or philosophy
2. Relate ideas in art, music, theatre, film, literature, or philosophy to the global context in which they were created
3. Interpret the global significance of works of art, music, theatre, film, literature, or philosophy to the human experience

Think critically

Learning Outcomes:

1. Identify an underlying argument
2. Make reasonable inferences from an argument
3. Assess the quality of evidence
4. Identify the thesis and conclusions in an argument

Develop ethical perspectives

Diversity

Learning Outcomes:

1. Identify examples of power and privilege
2. Explain the impact of power and privilege in everyday life
3. Describe personal beliefs, attitudes, and biases about people whose experiences, histories, cultures, and appearances are different than one's own

Empathy

Learning Outcomes:

1. Model empathy
2. Apply empathy to change behavior and build better relationships

Leadership

Learning Outcomes:

1. Exhibit integrity and reliability in individual action and institutional activities
2. Practice principle-centered leadership

3. Demonstrate responsibility when interacting with new technologies and information

Practice civic engagement

Learning Outcomes:

1. Recognize the potential for individual civic action to affect change
2. Construct a personal vision of a civic pathway
3. Lead organizations/projects in planning and implementing public participation that address local community needs, issues, and problems

WHICH ASSIGNMENT WILL BE SUBMITTED FOR THE GENERAL EDUCATION ASSESSMENT OF THE GOAL(S) STATED ABOVE?

Note: Each goal requires an assessment submission of student artifacts. For more information, see the GE Assessment webpage.

MATH 1003 addresses a General Education goal which is to apply quantitative reasoning. The course requires students to demonstrate this goal through homework, quizzes, exams and projects.

Email completed form to the Director of General Education Dr. Erin Clair at eclair@atu.edu

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