

## A Guide to General Education Student Learning Outcomes North Carolina A&T State University

Version: February 2, 2012

Revised: August 5, 2012

### General:

This document is intended as a guide to departments and faculty members requesting courses to be included on general education course lists.

For each general education student learning category (written communication; mathematical, logical, and analytical reasoning; scientific reasoning; social and behavioral sciences; fine arts and humanities; knowledge of African-American culture and history; global awareness; and student success) in the new NC A&T State University general education curriculum (passed by the Faculty Senate November 22, 2011), the following pages list:

- (1) one or more general education student learning outcomes,
- (2) a discussion of the intent or rationale for the learning outcome(s), and
- (3) a bulleted sample of more detailed learning objectives that might correspond to course-level outcomes for this general education category.

**Note 1:** The bulleted lists for each general education student learning category [referenced in (3) above] are intended to serve as *illustrations* or *examples* of the kinds of outcomes one would expect to see for courses included in this general education category. They do **not** mean that any single course in this category will/must meet all of these objectives.

They are intended to give you ideas for course-level student learning outcomes associated with the broader general education student learning outcomes. The bulleted lists are also not exhaustive; feel free to generate course-level student learning outcomes not listed here that are relevant for the associated general education student learning category.

**Note 2:** The general education student learning outcomes listed for each general education category represent the highest-level Bloom's taxonomy levels for the category and assume lower Bloom's taxonomy levels (e.g. an outcome indicating "application" implies "comprehension" and "knowledge").

**WRITTEN COMMUNICATION****Required General Education Student Learning Outcomes**

1. Apply writing practices appropriate to specific tasks and audiences.
2. Integrate the use of appropriate information technology tools throughout the writing process.

**Intent/Rationale for the Learning Outcomes Above:**

This outcome incorporates both writing and critical thinking, as the two complement each other. Freshman-level composition-based courses should provide students with a solid foundation in college-level writing and thinking skills, including research-writing skills. In addition, courses in this category should enable students to apply college-level writing skills to particular topics, issues, problems, processes, and procedures generally encountered in the major.

**Examples of Student Objectives in this Category Include the Ability To:**

- demonstrate writing as an iterative process
- incorporate effective use of correct grammar and mechanics in written work
- employ flexible strategies for generating ideas, drafting and revising
- illustrate critical thinking skills in the development of ideas and through writing in various rhetorical situations
- utilize digital tools for composing texts, and researching and evaluating information
- identify, evaluate, incorporate and properly document borrowed information
- utilize revision and peer editing for self-assessment and summative assessment
- work collaboratively with peers

**MATHEMATICAL, LOGICAL, AND ANALYTICAL REASONING****Required General Education Student Learning Outcomes**

*For courses emphasizing mathematical/quantitative reasoning:*

- 1a. Apply quantitative and mathematical reasoning to solve problems in diverse contexts.
- 2a. Evaluate quantitative information using a variety of methods.
- 3a. Communicate quantitative or mathematical information in multiple formats.

*For courses emphasizing logical/analytical reasoning:*

- 1b. Apply logical reasoning to solve problems in diverse contexts.
- 2b. Evaluate claims using a variety of methods.
- 3b. Communicate logical reasoning in multiple formats.

**Intent/Rationale for the Learning Outcomes Above:**

Students completing courses in this category should be able to employ mathematical, statistical, or logical reasoning skills to reason critically and solve problems in a variety of contexts. These higher-order skills imply an understanding of lower-order skills, including the ability to carry out basic mathematical operations and calculations, and understand basic mathematical, statistical, and logical terms and symbols. Students completing courses in this category should also be able to use mathematical, statistical, or logical reasoning skills to create, defend, and refute arguments and communicate those arguments clearly. Freshman-sophomore level courses in this category generally lead to further development of quantitative and analytical reasoning skills within the individual major.

**For courses emphasizing mathematical/quantitative reasoning:****Examples of Student Objectives in this Category Include the Ability To:**

- communicate mathematical information verbally, numerically, graphically, and symbolically
- demonstrate understanding of the terms and symbols used to analyze data and solve mathematical problems
- interpret, evaluate, and apply quantitative or symbolic models such as graphs, tables, formulas, scales, and distributions
- employ mathematical or statistical methods to formulate, describe, evaluate and solve applied problems in a variety of formats
- synthesize disparate information and knowledge to draw inferences, test hypotheses, and make decisions

**For courses emphasizing logical/analytical reasoning:****Examples of Student Objectives in this Category Include the Ability To:**

- communicate logical analysis verbally, graphically, and symbolically
- demonstrate understanding of the terms and symbols used to analyze claims and arguments
- interpret, evaluate, and apply logical reasoning verbally, symbolically, and graphically
- employ logical reasoning to formulate, describe, evaluate and solve applied problems in a variety of formats
- synthesize disparate information and knowledge to draw inferences, test hypotheses, and make decisions

**SCIENTIFIC REASONING****Required General Education Student Learning Outcomes**

1. Analyze real-world phenomena, issues, and problems using principles and processes of scientific inquiry.

*Note: A second student learning outcome was originally included in the Scientific Reasoning category (Feb. 2, 2012 version of this document). The Faculty Senate voted to delete the second student learning outcome in April, 2012.*

**Intent/Rationale for the Learning Outcomes Above:**

Scientific reasoning is a mode of inquiry that relies on empirical evidence to understand natural phenomena. Scientific reasoning is based on the process of observation, hypothesis formulation, data collection and analysis, and confirmation, rejection or refinement of hypotheses in an iterative process that sometimes leads to new explanations as new evidence emerges. This process is commonly referred to as the “scientific method”. Courses in this category should develop students’ skills in these areas in a variety of contexts and at increasingly higher levels.

**Examples of Student Objectives in this Category Include the Ability To:**

- apply the principles and process of scientific inquiry in the analysis of real-world issues and problems
- formulate and test hypotheses based on empirical data and experimental design
- differentiate between causation and correlation in the comparison of one or more events

**SOCIAL AND BEHAVIORAL SCIENCES****Required General Education Student Learning Outcome**

1. Apply methods of analysis used in the social and behavioral sciences in the examination of individual and group behavior.

**Intent/Rationale for the Learning Outcome Above:**

Courses in this category are intended to provide an introduction to the content, practices, and methods of analysis in social and behavioral science disciplines. These disciplines focus on the behavior of individuals, groups, and societies in various contexts. The social and behavioral sciences typically include the following disciplines: anthropology, criminal justice, economics, geography, history, political science, psychology, and sociology.

**HUMANITIES AND FINE ARTS****Required General Education Student Learning Outcome**

1. Examine human experience through the interpretation of artistic, intellectual, or cultural expression.

**Intent/Rationale for the Learning Outcome Above:**

Courses in this category are intended to provide an introduction to the content, practices, and methods of analysis in arts and humanities disciplines. The fine arts and humanities typically include the following disciplines: English composition and literature, foreign languages, philosophy, and visual and performing arts (art, dance, theatre, music).

**KNOWLEDGE OF AFRICAN-AMERICAN CULTURE AND HISTORY (Sub-Category)****Required General Education Student Learning Outcome**

1. Analyze the experiences of African-Americans from multiple perspectives.

**Intent/Rationale for the Learning Outcome Above:**

Students completing courses in this category should gain an understanding of the African-American experience, including the culture and traditions of people of African descent in the United States and the political, economic, cultural, and social factors that have shaped their experience.

**Examples of Student Objectives in this Category Include the Ability To:**

- describe the role of social, cultural, historical, and political factors in the African-American experience
- relate ideas and concepts related to the African-American experience across disciplines
- extend ideas and concepts related to the African-American experience to the broader concept of diversity
- display broad-mindedness, civility and cultural responsiveness when interacting with peoples from diverse cultures.

**GLOBAL AWARENESS (Sub-Category)****Required General Education Student Learning Outcome**

1. Examine the complexity of global issues from multiple societal perspectives.

**Intent/Rationale for the Learning Outcome Above:**

Globally competent students understand the complexity and interconnectedness of social, economic, political, scientific, and cultural issues and integrate that knowledge into their worldview, looking beyond national geography and identity to describe, address, and solve problems. Students completing courses in this category should understand the historical, social, political, religious, economic, and cultural factors that characterize global diversity and their impact on inter-cultural relationships.

**Examples of Student Objectives in this Category Include the Ability To:**

- analyze the impact of globalization on social, cultural, political, religious, and economic issues
- identify key characteristics, including geographic, historical, social, cultural, political, religious, and economic factors that define the global world
- describe historical factors that have contributed to today's globalized world
- compare and contrast key characteristics of two or more societies
- analyze the global inter-relationships embedded in key environmental, cultural, social, political, and economic problems faced by the world today
- evaluate social, political, and economic policies, practices and principles from a global perspective



**STUDENT SUCCESS****Required General Education Student Learning Outcome**

1. Develop skills that promote personal and academic success.

**Intent/Rationale for the Learning Outcome Above:**

New students are often challenged by the transition from high school to college, in particular as it relates to skills and dispositions required for academic, career, and personal success. Courses in this category should help students develop appropriate academic skills and develop plans for continuous personal success. In addition, these courses should help students develop appropriate habits of thought, behavior, and reflection to promote ongoing success in their academic and personal lives.

**Examples of Student Objectives in this Category Include the Ability To:**

- demonstrate use of effective academic skills (including understanding of course syllabi, effective study skills, and college-level reading, note taking and test taking strategies)
- demonstrate awareness of on-campus support services and resources
- demonstrate knowledge of critical campus processes, policies, and procedures (including advising, registration, degree audit, academic, and financial aid)
- create a plan for continuous academic and personal development.
- develop solutions to academic and personal barriers to success