CAAP Planning Workbook

for the Assessment of General Education Outcomes

A successful outcomes assessment study can be used to evaluate general education programs and enhance student learning. Considering the purpose of the study, and the amount of time, money and effort an institution must invest to achieve useful results, it is essential that the study be carefully planned. By considering issues such as course content, test content, sampling, student motivation, and test administration, an institution can be more confident of obtaining meaningful assessment results, and of optimally utilizing staff time and financial resources.

This workbook is designed to assist you in planning your outcomes assessment. Although extensive responses are not necessary, we encourage you to review these items thoroughly with your colleagues and respond thoughtfully.

We wish you success in your assessment efforts. Should you need assistance, or have questions, please contact:

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Part 1

1 Please list the stated goals of your institution's general education program. Based on these goals, what are the assessment questions that will allow you to determine your institution's progress in achieving these goals? What are all of the data sources that can help answer these questions? An example of an assessment question might be: "Does our general education core curriculum contribute to students' attainment of the written communication skills they will need to be successful in upper division coursework?" Examples of relevant data sources could include courses taken, course grades, portfolios, and CAAP test scores.

Assessment questions	Data sources

2 Please describe how you plan to use the results of your outcomes assessment study. Who will review and analyze the data? How will you address the issues that arise from the analysis and incorporate resulting recommendations into broader institutional planning? Will you establish benchmarks and monitor results on a longitudinal basis?

3 Define the group of students who are the focus of the study. (For example, all second semester sophomores who have completed their general education requirements.)

4 Please describe any student subgroups that you want to study separately. (Examples: Engineering majors, Hispanic students, non-traditional age students.)

5 Please state below whether you plan to test the entire reference group, or whether you intend to test a representative sample from it. If you plan to test a representative sample, please describe how you will select the sample.

6 If you plan to study a special subgroup, state whether you plan to test all students in it, or whether you intend to test a representative sample. If you plan to test a representative sample, please describe how you will select the sample. Note: Sampling members of a special subgroup from the entire reference group may not result in sufficient data for drawing valid conclusions. ACT requires a minimum of 25 student records to generate a subgroup report.

7 Please describe your plans to inform your faculty and to enlist their support for the study.

8 Please describe how you plan to motivate students to participate in the study and to do their best when taking the CAAP. (For suggestions regarding student motivation, please refer to Chapter 5.)

9 Briefly describe your plans for administering the CAAP, including test dates.

Part 2

An important step in ensuring that assessment results will be meaningful is for an institution to identify logical relationships between your general education goals, course content, and the contents of the CAAP test modules.

For example, if an institution wishes to ensure that all of its graduates are proficient in writing grammatically correct and logically coherent essays, then the requisite skills and knowledge must be taught through specific courses in the core curriculum (e.g., freshman English composition). The institution could then consider measuring these skills and knowledge with relevant CAAP test modules; in this instance, the Writing Skills and Writing Essay test modules would be appropriate.

This form is designed to help institutions identify relationships among general education goals, core courses, and the contents of the CAAP tests. Because a single individual is unlikely to be familiar with his or her institution's entire general education curriculum, ACT recommends that several faculty members, or perhaps a general education committee, collaborate when completing this form. Mathematics faculty, for example, are familiar with the contents of core courses in mathematics, and could, therefore, determine whether the CAAP Mathematics test will measure the skills and knowledge taught in these courses. They may not, however, be familiar with the contents of core courses in English.

The content areas of the CAAP tests are briefly described in the left column of each chart. The subheadings (in reverse white type) indicate the subscore content groupings for each test module. Please indicate in the middle columns the extent to which mastering these skill and knowledge areas is important to your institution's general education goals. Then, list in the right column the course(s) in which the skills and knowledge are taught.

Writing Skills Test

The Writing Skills Test is a 72-item test measuring students' understanding of the conventions of standard written English. Subscores are provided for Usage/Mechanics and Rhetorical Skills.

CONTENT AREAS **IMPORTANCE**

Usage/Mechanics	High	Med	Low	COURSE(S) in which these subjects are taught
Punctuation. Items in this category test the use and placement of commas, colons, semicolons, dashes, parentheses, apostrophes, and quotation, question, and exclamation marks.				
Grammar. Items in this category examine the use of adjectives, adverbs, and conjunctions, and test the agreement between subject and verb, and between pronouns and their antecedents.				
Sentence structure. Items in this category test relationships between/among clauses, the placement of modifiers, and shifts in construction.				
Rhetorical Skills	**High**	**Med**	**Low**	**COURSE(S) in which these subjects are taught**
Organization. Items in this category test the organization of ideas and the relevance of statements in context (order, coherence, unity).				
Strategy. Items in this category examine the appropriateness of expression in relation to audience and purpose, the strengthening of writing with appropriate supporting material, and the effective choice of statements of theme and purpose.				
Style. Items in this category test precision and appropriateness in the choice of words and images, rhetorically effective management of sentence elements, avoidance of ambiguous pronoun references, and economy in writing.				

Mathematics Test

The Mathematics Test is a 35-item test measuring students' mathematical reasoning abilities. It emphasizes quantitative reasoning rather than the memorization of formulas. Subscores are provided in Basic Algebra and College Algebra.

CONTENT AREAS **IMPORTANCE**

Basic Algebra	High	Med	Low	COURSE(S) in which these subjects are taught
Prealgebra. Items in this category involve operations with whole numbers, decimals, and fractions; order concepts; percentages; averages; exponents; scientific notation; and similar concepts.				
Elementary Algebra. Items in this category involve basic operations with polynomials, setting up equations, and substituting values into algebraic expressions. They may also require the solution of linear equations in one variable and other related topics.				
Intermediate Algebra. Items in this category assess students' understanding of exponents, rational expressions, and systems of linear equations. Other concepts such as the quadratic formula and absolute value inequalities may also be tested.				
Coordinate Geometry. Knowledge and skills assessed in this category may include graphing in the standard coordinate plane or the real number line, graphic conies, linear equations in two variables, graphing systems of equations, and similar types of skills.				
College Algebra	**High**	**Med**	**Low**	**COURSE(S) in which these subjects are taught**
College Algebra. Items in this category are based on advanced algebra concepts including rational exponents, exponential and logarithmic functions, complex numbers, matrices, inverses of functions, and domains and ranges.				
Trigonometry. Items in this category include concepts such as right triangle trigonometry, graphs of trigonometric functions, basic trigonometric identities, and trigonometric equations and inequalities.				

Reading Test

The Reading Test is a 36-item test that measures reading comprehension referring and reasoning skills. Reading passages come from the subject areas of Arts/Literature (selections from prose fiction and the humanities) and Social Studies/Sciences (selections from social studies and natural sciences). Subscores are provided based on the subject areas: Arts/Literature and Social Studies/Sciences.

	IMPORTANCE			
CONTENT AREAS	**High**	**Med**	**Low**	**COURSE(S) in which these subjects are taught**
Referring Skills. Items in this category require the student to derive meaning from text by identifying and interpreting specific information that is explicitly stated. Typical items of this type require students to recognize main ideas of paragraphs and passages, to identify important factual information, and to identify relationships among different components of textual information.				
Reasoning Skills. Items in this category require students to determine implicit meanings and to go beyond the information that is explicitly presented. Typical items in the category assess students' ability to determine meaning from context, to infer main ideas and relationships, to generalize and apply information beyond the immediate context, to draw appropriate conclusions, and to make appropriate comparisons.				

Science Test

The Science Test is a 45-item test designed to measure students' knowledge and skills in science. The subjects are drawn from biology, chemistry, physics, and the physical sciences. No subscores are provided for the science test.

	IMPORTANCE			
CONTENT AREAS	**High**	**Med**	**Low**	**COURSE(S) in which these subjects are taught**
Understanding. Students are presented with several hypotheses or viewpoints that are mutually inconsistent owing to different premises, incomplete or disputed data, or differing interpretations of data. Items in this format measure students' skills in understanding, analyzing, and comparing alternative hypotheses or viewpoints.				
Analyzing. Students are presented with graphic and tabular material similar to that found in science journals and texts. The items associated with this format measure skills such as graph reading, interpretation of scatterplots, and interpretation of information presented in tables, diagrams, and figures.				
Generalization. Students are provided with a description of one experiment or of several related experiments. Items in this format focus upon the design of experiments and the interpretation of experimental results.				

Critical Thinking Test

The Critical Thinking Test is a 32-item test measuring students' skills in analyzing, evaluating, and extending arguments. No subscores are provided for the Critical Thinking Test.

	IMPORTANCE			
CONTENT AREAS	**High**	**Med**	**Low**	**COURSE(S) in which these subjects are taught**
Analysis of Elements of Arguments. Items in this category assess the student's ability to identify essential elements of an argument, including hypotheses, premises, and conclusions, and also their ability to identify logical fallacies, exaggerated claims, unstated assumptions, analogies, and multiple points of view. Students' ability to recognize patterns and sequences of arguments is also tested, including their ability to see relationships of premises, subarguments, and subconclusions to the overall argument.				
Evaluation of Arguments. Items in this category assess the student's ability to evaluate arguments on the basis of consistency, validity, and strength of support. Students' ability to evaluate information on the basis of its consistency, relevance, and accuracy, and to make judgments about its sufficiency is also tested. In addition, students are assessed in their ability to evaluate replies to arguments on the basis of their intent, appropriateness, and strength.				
Extension of Arguments. Items in this category assess students' skills in using given premises to reach related conclusions and in recognizing the scope of application of arguments. Students' ability to develop or recognize arguments that are based on analogies is also assessed. Some items in this category also assess students' understanding of how modifications to an argument can strengthen or weaken the argument or resolve conflicts within the argument.				

Writing Essay

The Writing Essay test is designed to demonstrate a student's level of proficiency in the writing skills commonly taught in college-level writing courses and required in upper-division college work. Students respond to two separate prompts; a composite score is provided plus scores for both prompts.

	IMPORTANCE			
CONTENT AREAS	**High**	**Med**	**Low**	**COURSE(S) in which these subjects are taught**
Formulating an assertion about a given issue.				
Supporting that assertion with evidence appropriate to the issue, position taken, and a given audience.				
Organizing and connecting major ideas.				
Expressing those ideas in clear, effective language.				