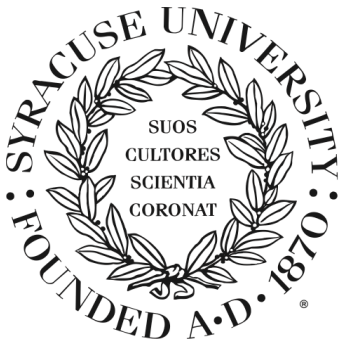


Syracuse University Guide for Developing an Assessment and Action Plan

Academic Degree Programs

July 2015

Office of the Associate Provost for Academic Programs

assessment.syr.edu

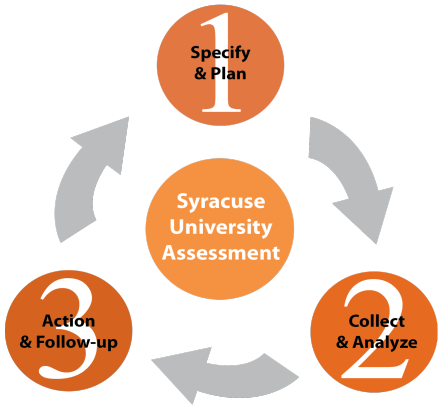
Syracuse University Assessment

Syracuse University is accountable to a number of external stakeholders including New York State, various individual program accreditors, and the Middle States Commission on Higher Education (Middle States). Middle States accreditation operates on a ten-year self-study cycle with a periodic review report submitted in year five. Since Syracuse University's last self-study in 2008, the accreditation landscape has changed to more centrally focus on the outcomes of student learning experiences.

To demonstrate our commitment to not only meet standards set by accrediting bodies, but to provide our students with an outstanding educational experience in and out of the classroom, Syracuse University will enhance our culture of assessment and continual improvement.

Assessment is integral to maintaining quality and effectiveness at any institution of higher education. Institutional assessment relies on the contributions of all academic, co-curricular, and functional areas campus-wide in meeting Syracuse University's mission and goals. Within the culture of assessment, the mission and goals of each academic, co-curricular, and functional area should align with the overall mission of the greater institution. From their individual mission and goals, each area will develop an Assessment and Action Plan.

An Assessment and Action Plan should be viewed as a process for continual improvement of products, processes, and services, as well as a tool for managing resources. It should be meaningful to its stakeholders and the results used to inform decision-making. From the results of assessment, each area should be able to determine what actions could be taken to improve the student experience, take those actions, and then measure whether those actions were effective.



Assessment Working Team

The Office of the Associate Provost for Academic Programs has put together an Assessment Working Team that is available for consultation. Team members can help you determine which type of Assessment and Action Plan should be developed, meet with departments and units, and provide workshops on assessment-related topics.

If you would like assistance, contact Gerald Edmonds, Assistant Provost for Academic Programs, at assessment@syr.edu.

Academic Degree Programs

An academic degree program results in a degree or certificate of advanced study. Academic degree programs are typically housed within academic departments or within a school or college; however, there are also academic degree programs that are interdisciplinary.

For example, the Mathematics department offers the following undergraduate academic degree programs: B.S. in Mathematics, B.A. in Mathematics, B.S. in Applied Mathematics, B.A. in Applied Mathematics, plus minors associated with these programs. The department also offers several graduate academic degree programs. Separate Assessment and Action Plans, which include student learning outcomes, will need to be developed for each of these.

Institutionally, all academic degree programs, including minors, will need an Assessment and Action Plan. For minors with a parent major, student learning outcomes should be a subset of the major's student learning outcomes.

There may be common outcomes across academic degree programs. For example, the B.S. in Mathematics and the B.A. in Mathematics may have outcomes in common; however, they should also have outcomes that differentiate them from one another.

Introduction to Assessment and Action Plans

This guide provides information on developing an Assessment and Action Plan for academic degree programs. The process for conducting assessment is organized into three phases:

Phase 1 – Specify and Plan:
Identify student learning outcomes. For each outcome, specify information, evidence, and measures to be collected, and define criteria that indicate success.

Phase 2 – Collect and Analyze:
Collect the data for measures specified in Phase 1. Analyze and interpret results.

Phase 3 – Action and Follow-up:
Indicate changes to be made and how you will know the change made a difference.

The appendices at the end of this guide provide various resources that may be useful to you as you develop your Assessment and Action Plan.

Appendix A: Glossary

Appendix B: Learning Outcome Action Verbs

Appendix C: Direct and Indirect Measures Examples



Phase 1—Specify and Plan

During this first phase, the focus is on identifying:

- Student learning outcomes
- Information that will be examined related to each outcome
- Criteria to determine whether the program achieved the outcome

I. Student Learning Outcomes

Every academic degree programs should define 5-7 learning outcomes[1] they seek to achieve. These outcomes should focus on what the students are expected to know or be able to do when they successfully complete the academic degree program.

Student Learning Outcomes	
Definition	**Student learning outcomes** are operational statements describing specific student behaviors that evidence the acquisition of desired knowledge, skills, abilities, capacities, attitudes, or dispositions.
Example	Students will be able to synthesize in-depth information of (subject) in the development of a research proposal.

Student learning outcomes should be written using active verbs that describe what students should be able to do, know, or produce. Outcomes should be specific, measurable, and attainable within the context of the degree program. As a reminder, these outcomes are assessed at the academic degree program level; they are not course level objectives.

II. Measures

For each student learning outcome, identify both **direct and indirect measures** that provide information and evidence of whether the student learning outcome is achieved.

Direct measures should be the primary means of demonstrating that student learning outcomes have been achieved. Direct assessment of student learning outcomes can be examined using embedded course assignments, capstone projects, portfolios, field experiences, and performances. If academic degree programs use published exams, such as exams for licensure or certification, as a requirement for completion of an academic degree program, the exam results can be used as a direct measure.

Indirect measures operate best as a support to the information gathered through direct measures. Alone, they are not sufficient to demonstrate the achievement of student learning outcomes. Indirect information is often gathered through surveys, interviews, and focus groups. It reflects the opinions and perceptions about a student learning outcome.

[1] 5-7 student learning outcomes is a suggested number. You may identify more if indicated by your program.

Example of Direct and Indirect Measures for the same Student Learning Outcome

Student Learning Outcome	Direct Measure	Indirect Measure
Students will be able to synthesize in-depth information of (subject) in the development of a research proposal.	The research proposal, written as a capstone experience, is assessed against a faculty-developed rubric.	Final course grades from the Crafting Research Proposals course.

Why are final course grades indirect measures?

Although a course grade provides information regarding progress toward the student learning outcome, a grade includes aspects that are not necessarily related to student learning. One example is attendance. While attendance may impact student learning, it is not directly related to what the student learned. Additionally, a final course grade often reflects progress toward many learning outcomes and is a compilation of the student's progress toward all of these outcomes. Singling out a research proposal with a rubric that details components and degrees of competency would create a direct measure of student learning.

There is no specific number of measures that should be included for each outcome; however, plans should include as many **direct measures** as possible. A suggested ratio of direct to indirect measures is 2:1. For examples of direct and indirect measures, see **Appendix C**.

III. Criteria for Success

For each **Measure,** identify a criterion that indicates that students have acquired the desired learning outcome. The criteria should be realistic and do not need to indicate perfection. Keep in mind that criteria are levels of success that you are striving to achieve.

Student Learning Outcome	Measures	Criteria
Students will be able to synthesize in-depth information of (subject) in the development of a research proposal.	• Assessment of research proposal for Crafting Research Proposals course	• 90% of the students achieve ratings of 4 or better, using a rubric with a scale of 1–5.
	• Course grades from the Crafting Research Proposals course	• 100% of students in the major will complete the course with a passing grade of C or better.

To determine meaningful and realistic criteria, look at past information about student work, alumni surveys, or employer surveys and feedback. The information you collect, while not perfect, should assist you in selecting meaningful criteria.

Phase 2—Collect and Analyze

The student learning outcomes from Phase 1 should not be simultaneously investigated. Instead, outcomes should be evaluated over a number of yearlong assessment cycles. During each assessment cycle, the faculty involved in the academic program should select and pursue specific outcomes. Phase 2 should then be completed for those outcomes.

Phase 2 focuses on collecting the evidence specified under measures and interpreting the results. Well-defined outcomes, measures, and criteria make it easier to collect the evidence identified in Phase 1 and provide meaningful analysis.

To begin this phase:

- Determine the plan for collecting the evidence
- Specify the person(s) responsible for collecting the evidence
- Specify the person(s) responsible for analyzing the evidence

I. Collect and Record Results

Collect and record the results of assessment activities. Write the results in as much detail as possible. For criteria, include exact numbers and percentages. This will increase your ability to interpret the information. For measures and criteria, include when the results were collected.

II. Analyze and Interpret Results

When analyzing and interpreting results, it is not sufficient to simply say your students are doing well. Determine what the results indicate about the academic degree program. The process of assessment is grounded in the belief that understanding the implications of the results and a proper interpretation requires personnel who are closely tied to the academic degree program. The interpretation should be as specific as possible, and be performed by a majority, if not all, faculty involved in the program.

Phase 1 and Phase 2 for an Example Academic Degree Program

School/College: College of Agriculture **Degree Awarded:** B.S. in Agriculture Sciences

Degree Program Title: Agricultural Sciences

PHASE 1			PHASE 2	
Learning Outcomes How are students expected to change as a result of the program?	**Measures** What direct and indirect assessment measures will be used?	**Criteria** How will the program's competency be determined?	**Results** What was learned in the assessment process?	**Interpretation** What will the results mean to the program?
Students will demonstrate knowledge in key soil science concepts.	• AGR 490 Capstone project: written component demonstrating student knowledge of key soil science concepts • Senior thesis project	• AGR 490: Using a rubric with a scale of 1-5, 90% of the students achieve ratings of 4 or higher on items related to this outcome. • Senior thesis project: Using a rubric with a scale of 1-5, 90% of students achieve ratings of 4 or higher on items related to this outcome.	• Ratings from Capstone Project: 85% students met the standard. • Ratings from Senior Thesis: 80% students met the standard. • Those who failed to meet the standard were most often deficient in soil aeration concepts.	Soil aeration concepts may be inadequately covered in prerequisite course AGR 230. A review of the course syllabus showed that aeration was being addressed early in the course; faculty determined that introduction of aeration later in the course might lead to better retention of these concepts.



Phase 3—Action and Follow-up

Using the information and evidence from Phase 1 and Phase 2, the academic degree program can now determine whether or not their student learning outcomes are being achieved. In Phase 3, the faculty can decide what concepts or skills are in need of reinforcement, and determine how the curriculum should be modified.

I. Action

Specify what action will be taken to improve learning. Based on the interpretation of results, the following questions should be considered:

- What can be improved?
- How should these changes be made?

The assessment process should foster action. Focus on one or two action items each year and decide who will be responsible for follow-up. As you implement your action plans, keep written records of activities related to the action as documentation of the process. Certain action items may be long term and results are reported in subsequent years.

II. Follow-Up

Follow-up refers to the plan for determining whether or not the action steps successfully improved the academic degree program. This section of the Assessment and Action Plan documents the impact of previous assessment cycles and closes the assessment loop.

Phase 3 for an Example Academic Degree Program

PHASE 3	
Action Based on the results and interpretation from Phase 2, what action will be taken?	**Follow-Up** How will you determine if the change made a difference?
The sequence of topics in AGRI 230 will be revised, putting aeration later in the course. In addition, faculty will review how key aeration concepts are reinforced later in the curriculum.	Increase in student achievement rating to criteria: 90% of the students achieve ratings of good or better in all dimensions.

Improving Unit Assessment Processes

After completing Phase 3, faculty should be provided an opportunity to recommend improvements to the unit's assessment processes.

Possible recommendations could include:

- Identifying the need for more, or different, measures for specific outcomes.
- Determining the need to streamline the process of collecting information.
- Identifying additional faculty who should be involved in assessment activities.

These recommendations should be included at the end of the Assessment and Action Plan.

Appendix A
Glossary

Academic Degree Program—Title of a given program within an academic department that results in a degree (Bachelor of Architecture, Master's in Media Studies, Certificate of Advanced Studies in School Counseling, Doctorate in Geography, etc.).

Accountability—Using the results of assessment to demonstrate the quality of a program or university to concerned audiences. (Suskie, 2009)

Action Research—Purpose is to inform and improve one's own practice rather than make broad generalizations. Assessment is a form of action research. (Suskie, 2009)

Assessment (of Institutional Effectiveness)—Institutional assessments are essential to identifying gaps in performance of organizations that may be used to inform plans for improvements. Efforts to identify strengths and weaknesses within the organization of the institution via measures of performance will inform improvements to efficiency, effectiveness, and sustainability of organizations.

Assessment (of Learning)—The ongoing process of: (1) establishing clear, measureable expected outcomes of student learning, (2) ensuring that students have sufficient opportunities to achieve those outcomes, (3) systematically gathering, analyzing, and interpreting evidence to determine how well learning matches our expectations, and (4) using the resulting information to understand and improve student learning. (Suskie, 2009)

Criteria (as a standard for assessment)—The values assigned to different levels of qualities, skills, and attributes found through the assessment, or how the work is valued and judged.

Curriculum Map—A grid that shows an academic degree program's courses as row headings and expected outcomes as column headings. If a particular outcome is getting too much or too little coverage, the curriculum map will reveal the imbalance. (Banta & Palomba, 2015); a table that compares key learning goals and course requirements that is used to assess the breadth of learning goals throughout a program's curriculum. (Suskie, 2009)

Degree—Degree awarded to student of a given academic department (e.g., BS, BA, MS, MA, CAS, Ph.D.).

Direct Measure of Assessment—Methods that involve direct display of knowledge and skills (text results, written assignments, presentations, classroom assignments) resulting from learning experience in the class/program. (Palomba & Banta, 1999)

Evaluation—The use of assessment findings (evidence/data) to judge program effectiveness; used as a basis for making decisions about program changes or improvement. (Allen, Noel, Rienzi & McMillin, 2002)

Formative Assessment—Assessment conducted during the life of a program (or performance) with the purpose of providing feedback that can be used to modify, shape, and improve the program (or performance). (Banta & Palomba, 2015)

Goals—The general aims or purposes of a unit that are consistent with its mission. Goals should be broadly stated, meaningful, achievable, and provide a framework for identifying outcomes.

Grading—The process by which a teacher assesses student learning through classroom tests, assignments, observations, interactions, performances and other forms of work; the context in which teachers establish that process; and the dialogue that surrounds grades and defines their meaning to various audiences. (Walvoord, 1998)

Indirect Measure of Assessment—Methods that involve perceptions of learning or improvement rather than actual demonstrations of outcome achievement (alumni and employer surveys, exit interviews).

Institutional Effectiveness—The degree to which an institution successfully achieves its mission and goals and is in compliance with accreditation standards. The effectiveness of an institution rests upon the contribution that each of the institution's programs and services makes toward achieving the goals of the institution as a whole.[2] System and processes used to determine how well Syracuse University is accomplishing its mission.

Key Performance Indicator (KPI)—A metric that provides an indication of performance of specific objectives. It can be used as a driver for improvement. A KPI is quick measure of how well a program or unit is doing.

Metrics—Quantitative measures summarizing outcomes related to performance. Objectives—Statements of what the unit strives to achieve. They are specific, measureable, achievable, results-oriented, and time bound.

Operational Objectives—Statements describing what the overall goal is intended to achieve. They should be written using active verbs that describe what unit will do ensure the goal is attainable.

Outcomes Assessment—Contributing systems and processes measuring academic, co-curricular, non- academic, and administrative unit success

Program Review—Comprehensive evaluation of an academic degree program that is designed both to foster improvement and demonstrate accountability. (Suskie, 2009)

Rubric—A scoring tool that lays out the specific expectations for an assignment or activity. (Stevens & Levi, 2013)

Standard—The minimal level elements, characteristics, and qualities that must be followed. In the context of curriculum, standards are the minimal level of material within a curriculum that must be taught to students. An accrediting body typically develops standards.

Student Development Outcomes—Statements describing the affective dimensions to be instilled or enhanced; assess affective dimensions or attitudes and values (not cognitive abilities); and consider growth in ethical, spiritual, emotional, and social responsibility dimensions (Bresciani, 2001; Denny, 2009 as cited in Culp & Dungy, 2012). These outcomes may detail how students exhibit an increase in self- discipline, become more respectful of others' values, involve themselves in community service, engage in reflective spirituality, etc.

Student Learning Outcomes—Statements describing specific student behaviors that evidence the acquisition of desired knowledge, skills, abilities, capacities, attitudes, or dispositions. They should be written using active verbs that describe what students should be able to do, know, or produce over time as a result of participation in the program.

Summative Assessment—Assessment conducted after a program has been in operation for a while, or at its conclusion, to make judgments about its quality or worth compared to previously defined standards for performance.

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[2] Encouraging and supporting campus wide involvement in improving instructional effectiveness. Presented by Andrea A. Lex, Ph.D., Vice President, Middles States Commission on Higher Education, April 2014, Philadelphia, PA.

Appendix B
Learning Outcome Action Verbs

This list of action verbs is adapted from Kemp's "Shopping List of Verbs" (2014) and based upon Bloom's Taxonomy of Learning. The list should be used to help specify actions and measures used for assessment. The verbs listed here can be used for any outcomes or objectives developed for an assessment plan. Each column includes (1) category from Bloom's Taxonomy of Learning, (2) definition of the category, and (3) action verbs associated with that category.

Knowledge	**Comprehension**	**Application**	**Analysis**	**Synthesis**	**Evaluation**
Knowledge of terms, facts, conventions, classifications, etc.	Comprehension of ideas, translations, interpretations, extrapolation.	Use of knowledge, problem solving, etc.	Examination of parts of information.	Fusion of ideas to produce unique plan, structure, pattern, etc.	Forming judgments based on criteria and evidence.
Define Describe Identify Label List Name Recognize Recall Repeat State	Characterize Classify Convert Defend Discuss Distinguish Establish Estimate Explain Express Extend Generalized Illustrate Indicate Infer Locate Paraphrase Predict Recognize Relate Review Rewrite Summarize Translate	Apply Change Choose Compute Demonstrate Discover Dramatize Employ Interpret Manipulate Model Modify Operate Practice Predict Prepare Produce Relate Schedule Show Sketch Solve Use Write	Analyze Appraise Breakdown Calculate Categorize Compare Contrast Criticize Diagram Differentiate Discriminate Distinguish Examine Experiment Identify Illustrate Infer Model Outline Point out Question Relate Select Separate Subdivide Test	Arrange Assemble Collect Combine Comply Compose Construct Create Design Develop Devise Explain Formulate Generate Plan Prepare Rearrange Reconstruct Relate Reorganize Revise Rewrite Set up Synthesize Tell Write	Appraise Argue Assess Choose Compare Conclude Contrast Defend Describe Discriminate Estimate Evaluate Explain Interpret Judge Justify Predict Rate Relate Select Support Value

Appendix C
Direct and Indirect Measures Examples[3]

Direct Evidence of Student Learning Outcomes

- Ratings of student skills by their field experience supervisors or employers
- Scores and pass rates on appropriates licensure or certification exams such as Praxis or National Council Licensure Examination (NCLEX) or other published tests such as Major Field Tests that assess key learning outcomes
- Capstone experiences such as research projects, presentations, theses, dissertations, oral defenses, exhibitions, and performances, scored using a rubric
- Other written work, performances, and presentations, scored using a rubric
- Portfolios of student work
- Scores on locally designed multiple choice or essay tests such as final examinations in key courses, qualifying examinations, and comprehensive examinations, accompanied by test blueprints describing what the test assesses
- Score gains between entry and exit on published or local tests or writing samples
- Observations of student behavior (such as presentations and group discussions), undertaken systematically and with notes recorded systematically
- Summaries and assessments of electronic discussion threads
- Think-alouds, which ask students to think aloud as they work on a problem or assignment
- Classroom response systems (clickers) that allow students in their classroom seats to answer questions posed by the teacher instantly and provide an immediate picture of student understanding
- Feedback from computer-simulated tasks such as information on patterns of action, and decisions
  Student reflections on their values, attitudes, and beliefs

Indirect Evidence of Student Learning Outcomes

- Course grades and grade distributions
- Assignment grades, if not accompanied by a rubric or scoring criteria
- Retention and graduation rates
- For four-year programs, admissions rates into graduate programs and graduation rates from those programs
- Scores on tests required for further study (such as Graduate Record Examinations) that evaluate skills learned over a lifetime
- Quality and reputation of graduate programs into which alumni are accepted
- Placement rates of graduates into appropriate career positions and starting salaries
- Alumni perceptions of their career responsibilities and satisfaction
- Student ratings on their knowledge and skills and reflections on what they have learned over the course of the program
- Questions on end-of-course student evaluation forms that ask about the course rather than the instructor
- Student, alumni, and employer satisfaction with learning, collected through surveys, exit interviews, or focus groups
- Voluntary gifts from alumni and employers
- Student participation rates in faculty research, publications, and conference presentations
- Honors, awards, and scholarships earned by students and alumni

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[3] Suskie, L. (2009) *Assessing student learning: A common sense guide* (2nd ed). CA: Jossey-Bass.