Assessment for Student Learning Handbook
IT'S ALL ABOUT HELPING STUDENTS LEARN

Are our students learning?
What do we want our students to know and be able to do?
How will we know what our students have learned?

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Diagnostic, Formative and Summative Assessment  
(An Overview)

Assessment is the process of gathering data. More specifically, assessment is the ways instructors gather data about their teaching and their students’ learning (Hanna & Dettmer, 2004). The data provide a picture of a range of activities using different forms of assessment such as: pre-tests, observations, and examinations. Once these data are gathered, you can then evaluate the student’s performance. Evaluation, therefore, draws on one’s judgment to determine the overall value of an outcome based on the assessment data. It is in the decision-making process where we design ways to improve the recognized weaknesses, gaps, or deficiencies.

Types of Assessment
There are three types of assessment: diagnostic, formative, and summative. Although the three are generally referred to simply as assessment, there are distinct differences between them.

Diagnostic Assessment
Diagnostic assessment can help you identify your students’ current knowledge of a subject, their skill sets and capabilities, and to clarify misconceptions before teaching takes place. Knowing students’ strengths and weaknesses can help you better plan what to teach and how to teach it.

Types of Diagnostic Assessments
- Pre-tests (on content and abilities)
- Self-assessments (identifying skills and competencies)
- Discussion board responses (on content-specific prompts)
- Interviews (brief, private, 10-minute interview of each student)

Formative Assessment
Formative assessment provides feedback and information during the instructional process, while learning is taking place. Formative assessment measures student progress but it can also assess your own progress as an instructor. For example, when implementing a new activity in class, you can, through observation and/or surveying the students, determine whether or not the activity should be used again (or modified). A primary focus of formative assessment is to identify areas that may need improvement. These assessments typically are not graded and act as a gauge to students’ learning progress and to determine teaching effectiveness (implementing appropriate methods and activities).

In another example, at the end of the third week of the semester, you can informally ask students questions which might be on a future exam to see if they truly understand the material. An exciting and efficient way to survey students’ grasp of knowledge is through the use of clickers. Clickers are interactive devices which can be used to assess students’ current knowledge on specific content. For example, after polling students you see that a large number of students did not correctly answer a question or seem confused about
some particular content. At this point in the course you may need to go back and review that material or present it in such a way to make it more understandable to the students. This formative assessment has allowed you to “rethink” and then “re-deliver” that material to ensure students are on track. A primary focus of formative assessment is to identify areas that may need improvement. It is good practice to incorporate this type of assessment to “test” students’ knowledge before expecting all of them to do well on an examination.

Types of Formative Assessment

- Observations during in-class activities; of student’s non-verbal feedback during lecture
- Homework exercises as review for exams and class discussions
- Reflection journals that are reviewed periodically during the semester
- Question and answer sessions, both formal—planned and informal—spontaneous
- Conferences between the instructor and student at various points in the semester
- In-class activities where students informally present their results
- Student feedback collected by periodically answering specific question about the instruction and their self-evaluation of performance and progress

Summative Assessment

Summative assessment takes place after the learning has been completed and provides information and feedback that sums up the teaching and learning process. Typically, no more formal learning is taking place at this stage, other than incidental learning which might take place through the completion of projects and assignments.

Rubrics, often developed around a set of standards, outcomes (course or program) or expectations, can be used for summative assessment. Rubrics can be given to students before they begin working on a particular project so they know what is expected of them (precisely what they have to do) for each of the criteria. Rubrics also can help you to be more objective when deriving a final, summative grade by following the same criteria students used to complete the project.

High-stakes summative assessments typically are given to students at the end of a set point, during or at the end of the semester, to assess what has been learned and how well it was learned. Grades are usually an outcome of summative assessment: they indicate whether the student has an acceptable level of knowledge gained - is the student able to effectively progress to the next part of the class? To the next course in the curriculum? To the next level of academic standing?

Summative assessment is more product-oriented and assesses the final product, whereas formative assessment focuses on the process toward completing the product. Once the project is completed, no further revisions can be made. If, however, students are allowed to make revisions, the assessment becomes formative, where students can take advantage of the opportunity to improve.
Types of Summative Assessment

- Examinations (major, high-stakes exams)
- Final examination (a truly summative assessment)
- Term papers (drafts submitted throughout the semester would be a formative assessment)
- Projects (project phases submitted at various completion points could be formatively assessed)
- Portfolios (could also be assessed during its development as a formative assessment)
- Performances
- Student evaluation of the course (teaching effectiveness)
- Instructor self-evaluation

Summary

Assessment measures if and how students are learning and if the teaching methods are effectively relaying the intended messages. Hanna and Dettmer (2004) suggest that you should strive to develop a range of assessment strategies that match all aspects of your instructional plans. Instead of trying to differentiate between formative and summative assessments, it may be more beneficial to begin planning assessment strategies to match instructional goals and objectives at the beginning of the semester and implement them throughout the entire instructional experience. The selection of appropriate assessments should also match course and program objectives necessary for accreditation requirements.
Assessment for Student Learning at NCTA

NCTA is all about helping students learn. We’re committed more than ever to creating learning-centered environments where faculty, administrators, and staff work actively to help students learn. Using methods of Assessment FOR Student Learning is our way of assuring that learning is occurring and improving. We’ve learned that “one size does not fit all.” However, the improvements that do result from an assessment process make the challenge of finding answers to that significant question, “How do we know what our students have learned?”

We are discovering that unlike evaluation, which looks at mastery of outcomes and process, Assessment FOR Learning looks at the process of learning or failing to learn. We ask the question, “If learning has not been achieved, what factors or behaviors have interfered with the learning process, and what can we do about it?” Processes and outcomes are connected.

The ASSESSMENT FOR STUDENT LEARNING HANDBOOK provides a framework for continuous improvement of student learning and a commitment to program excellence. Our process provides evidence that:

- Learning outcomes are observable and are performed by the students
- Curriculum alignment provides the opportunity for students to achieve these outcomes because the curriculum is driven by intended learning outcomes and assessment evidence
- Learning opportunities are consistent and contribute to student learning
- Successful program completion provides students with the skills and abilities described in the general education goals and are clear enough to be understood by our stakeholders
- Faculty teaching NCTA courses provide students with multiple integrated learning opportunities to assure that students will be able to do outside the learning environment (classroom and labs) what they have learned through their learning experiences
Student Learning Outcomes Development and Assessment Policy and Procedures

PURPOSE:

The purpose of this initiative is to provide guidance for:

1. The development of appropriate student learning in various courses.
2. Assessing the degree to which students are achieving appropriate learning.
3. Developing a system for measuring and reporting student learning.
4. Assuring that the results of student learning outcomes measurement are used to improve subsequent teaching and learning activities.

NCTA Student Learning Outcomes Development and Assessment Goals:

By the end of each semester, starting fall 2013, faculty in all courses will document the measurement of student learning outcomes and the use of those assessment results to improve learning in subsequent courses.

By the end of spring 2014 semester, all programs will develop appropriate program level student learning outcomes with the assistance of external advisory groups and develop a curriculum map which assigns those program level student learning outcomes to individual courses.

PROCEDURES:

These are the general steps to be used for the development and assessment of student learning outcomes at NCTA:

1. Develop program level student learning outcomes. Program level student learning outcomes are the knowledge, skills and values that students graduating from this program should possess. Generally, faculty meets with an advisory group to develop program level student learning outcomes. The advisory group consists of disciplinary experts, industry leaders, external faculty, and others with knowledge of the field. In disciplines with disciplinary accreditation, such as veterinary technology, the accrediting body determines what the student learning outcomes will be. Programs generally have 15 to 20 program level student learning outcomes, although this can be variable. The process used to develop program level student learning outcomes should be documented and the results should be reevaluated on a regular basis. Program review is the formal method for evaluating program level student learning outcomes. Program level student learning outcomes should be available on the college website.

2. Assign program level student learning outcomes to specific courses at the college. This is generally done by developing a curriculum map or matrix which lists program level student learning outcomes along one axis and department courses along the
other axis. A checkmark in the matrix then indicates which courses cover each program level student learning outcome. The curriculum map for each program should be available on the college website.

3. **Faculty teaching individual courses are responsible for the student learning outcomes** that have been assigned to their courses. Faculty may decide to add additional student learning outcomes at their discretion. Each course should generally have **two student learning outcomes per credit** (for example, a three credit course would have six student learning outcomes) although this may be variable, based on instructor needs. Course level student learning outcomes should be listed in the syllabus for each course.

4. Faculty is responsible for selecting activities and facilitating an environment results in student attainment of the student learning outcomes. Often, this involves activities such as lectures, assigned readings, laboratory activities, appropriate demonstrations, course discussions, student projects, guest lecturers, etc.

5. Faculty identify one objective, direct measure for each student learning outcome and a benchmark of success for each outcome. Often faculty use rubrics to assess student learning outcomes. A rubric is defined as "a document that articulates the expectations for an assignment by listing the criteria, or what counts, and describing levels of quality from excellent to poor" (from [http://rubistar.4teachers.org/](http://rubistar.4teachers.org/), a free rubric development website). Three examples of the relationship between a student learning outcome and a rubric are presented as an appendix to this document.

6. An indirect measure of each student learning outcome will be determined by asking for student feedback on student learning outcomes attainment as part of the course evaluation process. A report is generated each semester summarizing the results of this indirect assessment of student learning outcomes. Division chairs will meet with faculty and discuss intervention strategies for those student learning outcomes with an average indirect measure below 3.0 on a five-point scale.

7. Each semester, faculty report student learning outcomes assessment. The report conforms to the college template and contains:
   a. The list of student learning outcomes by course
   b. The assessment measure used for each student-learning outcome
   c. Assessment results – student progress towards achieving the student learning outcome
   d. An explanation of how the results are used to improve student learning in subsequent semesters.
8. SLO reports are due by January 15 for fall semester courses and by June 15 for spring semester courses. All assessment plans and reports are available on the NCTA assessment webpage - http://ncta.unl.edu/assessment

9. The course reports are compiled and submitted to the division chair as part of the faculty member's annual evaluation process.

10. Division chairs evaluate student learning outcomes results and assist faculty in improving outcomes, if necessary. Division chairs may direct faculty to the NCTA Assessment Committee for additional assistance.

11. Summary reports. The NCTA assessment committee will be responsible for developing an annual report which documents the number of SLO's assessed, the number of SLO's which ranked below three on the indirect measure, and the percentage of courses which were assessed for SLO's. This document will be maintained on the assessment webpage.

12. NCTA academic divisions will update their curriculum maps each summer with final edits being completed by July 15 of each year.

INSTITUTIONAL OVERSIGHT:

The NCTA Assessment Committee is responsible for decisions regarding the development, support and implementation of the institutional assessment system and the monitoring of the quality of assessment activity of academic and co-curricular programs. The NCTA Assessment Chair is responsible for coordinating all aspects of campus assessment, including efforts associated with institutional learning outcomes and curricular programs. The chair assists units, as needed, with planning, designing, implementing, analyzing, reporting and disseminating assessment results. The chair promotes best practices in assessment and delivers regular assessment training for campus stakeholders.

BACKGROUND INFORMATION (for additional information, see The National Institute for Learning Outcomes Assessment at http://learningoutcomesassessment.org).
Example 1 of a student learning outcome and an associated rubric:

**Student Learning Outcome:** Upon completion of this course, students will be able to weld proficiently in the flat position using common electrodes.

**Rubric:** Using 6011, 7018 and 6013 electrodes, students will produce a butt weld, tee weld, fillet weld, and lap weld which scores a minimum of 3 on a scale of 1 to 5 when evaluated for arc length, travel speed, penetration, and current.

**Sample rubric scorecard:**

<table>
<thead>
<tr>
<th></th>
<th>1= Poor</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current</td>
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<td></td>
</tr>
<tr>
<td>Arc Length</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Travel Speed</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Penetration</td>
<td></td>
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<td></td>
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</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Defects:</th>
<th>Causes:</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐ Pores/Pits</td>
<td>☐ Proper current, travel speed, and arc length</td>
</tr>
<tr>
<td>☐ Undercut</td>
<td>☐ Current too low</td>
</tr>
<tr>
<td>☐ Improper Fusion</td>
<td>☐ Current too high</td>
</tr>
<tr>
<td>☐ Overlap</td>
<td>☐ Arc length too short</td>
</tr>
<tr>
<td>☐ Insufficient Penetration</td>
<td>☐ Arc length too long</td>
</tr>
<tr>
<td>☐ Excessive Penetration</td>
<td>☐ Travel speed too slow</td>
</tr>
<tr>
<td>☐ Excess Weld Spatter</td>
<td>☐ Travel speed too fast</td>
</tr>
<tr>
<td>☐ Bead is Not Uniform</td>
<td>☐ Inconsistent Speed</td>
</tr>
<tr>
<td>☐ Burn Through</td>
<td>☐ Too severe</td>
</tr>
<tr>
<td>☐ None</td>
<td></td>
</tr>
</tbody>
</table>

**Examples of Welding Beads**

A. Proper current, travel speed, arc length
B. Current too low
C. Current too high
D. Arc length too short
E. Arc length too long
F. Travel speed too slow
G. Travel speed too fast
**Example 2 of a student learning outcome and an associated rubric:**

**Student Learning Outcome:** Upon completion of this course, students will demonstrate proper beginner level English riding techniques.

**Rubric:** Students will score at least 7 on a scale of 1 through 10 when evaluated for (1) appropriate professional presentation, (2) execution of maneuvers required for chosen seat, and (3) rider position and equitation.

### Rubric scorecard

<table>
<thead>
<tr>
<th>Professional Presentation (appearance, poise, polish)</th>
<th>Student</th>
<th>Date</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>9-10</td>
<td>Rider is neat, clean and correctly attired. Equipment is appropriate for schooling the discipline and is also neat and clean. Rider executes required elements with confidence and polish.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7-8</td>
<td>Rider is fairly neat and clean. Attire is mostly correct but lacks polish. Equipment is appropriate for schooling the discipline and is mostly neat and clean. Rider completes required elements but does not have the confidence one would like to see in a show ring ready rider.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5-6</td>
<td>Rider is somewhat neat and clean. Attire is mostly correct but is III fitted or sloppy (un-tucked, baggy tee shirt, jeans or jods too short etc.) Equipment is correct but dirty/ sloppy. Stirrup length incorrect. Desired maneuvers executed but without any polish</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3-4</td>
<td>Attire and appearance are somewhat messy. Clothes/boots not clean or not proper for seat ridden. Longer hair messy and not up in some manner. Equipment mostly correct but III fitted. Knotted split reins or game reins on a western horse. Rider lacks poise and seems unsure of what to do on the horse</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0-2</td>
<td>Attire and appearance do not reflect that the rider has any plans to ride a horse with someone watching. Incorrect equipment such as western saddle and hunt bridle. Equipment which would not be allowed in the show ring for that discipline (mechanical hacks on all but jumpers, draw reins, tie downs, over and under) Improper footwear, jeans/jods/breeches with holes, tank tops, bare midriffs etc.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Execution of Maneuvers Required for Chosen Seat

<table>
<thead>
<tr>
<th>#</th>
<th>Grade</th>
<th>Student</th>
</tr>
</thead>
<tbody>
<tr>
<td>9-10</td>
<td>A Rider and horse execute smooth transitions at the correct times. Horse and rider work together smoothly. Horse is going in a frame correct for the discipline and responds to the riders quickly and quietly. Very few minor mistakes such as late lead changes or minor resistance from the horse.</td>
<td></td>
</tr>
<tr>
<td>7-8</td>
<td>B Rider and horse execute mostly smooth and correct transitions with a few errors such as late transitions, picking up an improper lead but quickly correcting, breaking gait for a stride or two, adding or leaving out a stride in a line of jumps, picking up incorrect diagonal but quickly fixing.</td>
<td></td>
</tr>
<tr>
<td>5-6</td>
<td>C Rider and horse execute the required maneuvers but with some errors. Incorrect lead or gait for more than a few strides. Late transitions, horse very resistant during transitions exhibiting head tossing/bucking/kicking but rider is able to work through that resistance.</td>
<td></td>
</tr>
<tr>
<td>3-4</td>
<td>D Rider and horse execute most of the required maneuvers but with major errors such as stopping at a jump, dragging a lead for an entire circle, missing a diagonal, missing a transition, over/inappropriate use of bit/spurs/sticks to attempt to get horse to complete required maneuvers</td>
<td></td>
</tr>
<tr>
<td>0-2</td>
<td>F Rider and horse execute some of the required maneuvers but have major errors such a seeming to be unaware of missed leads/diagonals/appropriate locations for transitions.</td>
<td></td>
</tr>
</tbody>
</table>

### Rider position and Equitation

<table>
<thead>
<tr>
<th>#</th>
<th>Grade</th>
<th>Student</th>
</tr>
</thead>
<tbody>
<tr>
<td>9-10</td>
<td>A Rider’s leg and hand position and use are correct for discipline. Reins held and used correctly. Legs used as cues and remain in proper secure position throughout ride. Balanced in all required positions for discipline (sitting, positing, 2-point, and release over jumps) Rider uses seat/weight effectively to help horse and does not hinder its movement. Uses soft eyes to navigate arena smoothly and effectively.</td>
<td></td>
</tr>
<tr>
<td>7-8</td>
<td>B Rider’s leg and hand position and use are correct for discipline. Reins held correctly but some over steering may occur. Legs used as cues but sometimes appear loose or in a less than secure position throughout ride. Mostly balanced in all required positions for discipline but may lean a bit or get too far over a jump (sitting, positing, 2-point, release over jumps) Rider generally uses seat/weight effectively to help horse and does not hinder its movement but may have moments of hindrance. Uses soft eyes to navigate arena smoothly and effectively but occasionally looks down...</td>
<td></td>
</tr>
<tr>
<td>5-6</td>
<td>C Rider’s leg and hand position and use are mostly correct for discipline. Reins held correctly but hands move more than is appropriate. Legs sometimes over or under used and often appear loose or in a less than secure position throughout ride. Somewhat balanced in all required positions for discipline but may lean a bit, get too far over a jump, bounce more than needed at a sitting trot (sitting, positing, 2-point, release over jumps) Rider generally uses seat/weight effectively to help horse and does not hinder its movement but may have moments of hindrance. Uses eyes okay but looks down for leads/diagonals, execution is not fluid due to rider not looking far enough ahead.</td>
<td></td>
</tr>
<tr>
<td>3-4</td>
<td>D Rider’s leg and hand position and use are somewhat correct for discipline. Reins held incorrectly but used somewhat effectively. Legs loose/heels up over use or no use of leg for cue. Rider lacks overall balance bouncing on horses back, landing hard when posting/remaining in horse's way over a jump. Leans over to check lead, leans forward for canter/lope.</td>
<td></td>
</tr>
<tr>
<td>0-2</td>
<td>F Use of hands and legs not correct. Reins held or used incorrectly for discipline. Leg loose, heel up, rider bounces on horses back, leans too far forward or back, punishes horse's mouth with hands either on purpose or due to lack of balance and using mouth to balance.</td>
<td></td>
</tr>
</tbody>
</table>
**Example 3 of a student learning outcome and an associated rubric:**

**Student Learning Outcome:** Upon completion of this course, students will be able to write at a level of proficiency sufficient to convey ideas accurately and professionally.

**Rubric:** Students will be able to write a technical document which is ranked acceptable or superior on all key writing traits, as identified in the following rubric scorecard:

<table>
<thead>
<tr>
<th>Rubric scorecard:</th>
<th>Student Date</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Score</strong></td>
<td><strong>Writing Trait</strong></td>
<td><strong>Unacceptable (1)</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Organization of Ideas and Content</strong></td>
<td>Writing is not concise and has a tendency to ramble. Lack of focus and organization interfere with communication and understanding. If appropriate: Lacks a clear introduction and conclusion. Needs work.</td>
</tr>
<tr>
<td></td>
<td><strong>Sentence Structure</strong></td>
<td>Sentences don’t express ideas well and are poorly developed. Sentence structure is sometimes so poor that it makes reading and understanding difficult. Sentences would sound strange if read out loud. Needs work.</td>
</tr>
<tr>
<td></td>
<td><strong>Paragraph Structure</strong></td>
<td>Sentences within a paragraph are unrelated. No clear direction within the paragraph. Connections between paragraphs are confusing. Needs work.</td>
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<tr>
<td></td>
<td><strong>Word Choice and Tone</strong></td>
<td>Writer struggles to use appropriate vocabulary. Words are used incorrectly. Tone and word choice are inappropriate for intended audience. Inappropriate use of slang and cliches. Needs work.</td>
</tr>
<tr>
<td></td>
<td><strong>Grammar, Punctuation, and Spelling</strong></td>
<td>Writing contains numerous and/or significant errors which interfere with comprehension and distract from the message. For example, three or more errors on a page, or for longer papers, more than five errors in the whole paper. Needs work.</td>
</tr>
<tr>
<td></td>
<td><strong>Professional Format and Use of Conventions</strong></td>
<td>Document has numerous and significant printing and/or formatting problems. Aesthetic qualities of the paper would be an embarrassment to an organization. Doesn’t follow basic formatting conventions (e.g., citations and documentation). Needs work.</td>
</tr>
<tr>
<td></td>
<td><strong>Professionalism</strong></td>
<td>The reader (e.g., student, instructor, coworker, client, supervisor) of this document would view it as unprofessionally written.</td>
</tr>
<tr>
<td></td>
<td><strong>Length</strong></td>
<td>More than 20% too long or too short.</td>
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### STUDENT LEARNING OUTCOMES

**Instructor**

**Semester**

<table>
<thead>
<tr>
<th>Course Name and Semester</th>
<th>Student Learning Outcomes</th>
<th>Assessment Measure</th>
<th>Assessment Results</th>
<th>Use of Results to Improve Learning</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Example: Students will be able to weld proficiently in the flat position using common electrodes</td>
<td>Rubric</td>
<td>22</td>
<td>18</td>
</tr>
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<td>1.</td>
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<th>Assessment Results</th>
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<td>4.</td>
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Statements on Student Learning and Improvement
Philosophy of Student Learning Assessment (Catalog Statement)

Nebraska College of Technical Agriculture believes that the college can influence how well and how much students learn. As an institution of higher learning, the mission of the Nebraska College of Technical Agriculture “is dedicated to the development of innovative individuals for the agriculture industry and related sciences.”

Academic assessment provides systematic, routine processes that allow the faculty and students to determine the degree that students are achieving the stated student learning outcomes. The following questions guide the assessment process.

Are our students learning?
1. How are students learning?
2. How much are students learning?
3. To what extent are students learning?

Purpose of Academic Assessment (Syllabus Statement)

Academic assessment is the process for ongoing improvement of student learning and success. The assessment program at Nebraska College of Technical Agriculture has four specific interrelated purposes.

1. To improve student learning
2. To improve teaching strategies
3. To document successes and identify opportunities for improvement
4. To provide evidence for institutional effectiveness

Nebraska College of Technical Agriculture’s assessment program is mission-driven and faculty owned. It includes assessment of courses and programs in the following divisions:

Agriculture Production Systems
   Animal Science
   Agronomy
Horticulture Systems
Agribusiness Management Systems
Veterinary Technology
NCTA Assessment Goals FOR Student Learning

The goals of the NCTA Assessment Committee for Student Learning are to

- Promote a community of collaboration and inquiry to share ideas, find solutions, and build innovations regarding student learning

- Support student learning outcomes as the core of faculty, student services, and workforce development to strive for partnerships among campus educators while creating innovative learning experiences for students

- Create a resource center to provide a collaborative environment to engage faculty, staff, administrators, and the college community in outcome assessment practices

- Create a repository for required academic assessment reports and best practices in assessment that will be accessible to all faculty, administrators, staff, students, and other interested constituents

- Work collaboratively with academic divisions to support assessment activities

- Strengthen the measurement of general education to develop student learning

- Maintain a website to increase the visibility, communication, and importance of assessment for student learning in all learning areas and modes of delivery

- Maintain and disseminate the Assessment for Student Learning Handbook

- Collaborate with curriculum management to integrate assessment evidence into the curriculum review process

- Integrate practices with curriculum development, instructional design, distance learning, student services, community education, and workforce development.

Some of the activities to achieve these goals include the following:

- Developing, scheduling, presenting, and coordinating campus assessment activities such as work sessions, seminars, and training (in coordination with division and college assessment committees)

- Maintaining an assessment web page that includes
  - Minutes of the Assessment Committee meetings
  - An assessment glossary of operational terms
  - Frequently asked questions (FAQs)
  - Best practices on campus
  - Information on assessment conferences
• Disseminating an annual report written regarding assessment communication activities (based on information from division assessment committees) and best practices

• Collaborating with division committees to provide support and mentoring.
Assessment Committee

The Assessment Committee

The Assessment committee is a body responsible for examining the assessment policy and procedures of the College. This includes the formal process of campus-wide learning outcomes assessment and reporting the results of that assessment. The specific charge to the committee includes the following activities:

- Review and recommendations of related policy and procedure
- Overseeing the implementation and compliance to the College Assessment Plan
- Examining and critiquing Program Outcomes Validation Reports and providing an Executive Summary of these reports to the Dean
- Examining and critiquing student achievement of academic outcomes reports for both program and general education outcomes and providing an Executive Summary of these reports to the Dean
- Monitoring curricular and methodology changes in programs/divisions that occur because of program outcomes validation and the measurement of student achievement of academic outcomes

In addition to the aforementioned responsibilities, the committee also has specific charge for the following activities related to General Education. Validation and assessment of the following 7 general education learning outcomes:

**Intellectual and Practical**
1. Inquiry and analysis
2. Critical thinking
3. Creative thinking
4. Written communication
5. Oral communication
6. Reading
7. Information literacy

The committee is also responsible for the following activities:

- Reviewing the general education outcome statements to ensure they are stated in measurable terms
- Conducting a general education outcome validation study every three years
- Writing a general education outcome validation report to submit to the division committee
- Reviewing, evaluating, and recommending instruments to assess the general education outcomes
- Monitoring the distribution and collection of instruments used to assess the general education outcomes
• Monitoring, collecting, analyzing, recording, and distributing data on the assessment of general education outcomes on the institutional/program/classroom level
• Writing an annual report to the College Assessment committee of Instructional Council regarding general education outcomes assessment activities.

**Appointed Membership**

As a part of Nebraska College of Technical Agriculture’s Instructional Council, the Committee includes 3 Division Chairs (Animal Science, Agronomy and General Education), 2 faculty, 1 administrator, and 1 student. The Associate Dean chairs the committee.
Assessment FOR Student Learning – Frequently Asked Questions (FAQs)

Assessment is a type of action research to help us gather indicators that will be useful for improving student learning through our curriculum and teaching strategies. It focuses on student learning and what the student will be able to do and not so much on what we are going to teach. The following Q & As will attempt to provide answers to some frequently asked questions that may further your understanding of the assessment process.

1. **Q. Why do we assess FOR student learning?**
   **A.** To do assessments for the goal of doing an assessment and writing a report would be a waste of time. Link your assessment practices to compelling, powerful, and consequential processes such as division review or program validation. You can link it to curriculum revisions, distance learning, retention, service learning, and improving student learning and teaching strategies.

   There is considerable evidence that assessment drives student learning and curriculum. Most important, our assessment tools tell our students what we consider to be important and make clear our expectations of what the student will do to be successful in the course or program. They will learn what we guide them to learn through our assessments. By using appropriate assessment techniques, we can encourage our student to raise the bar.

2. **Q. I already give tests and grades. Isn’t that assessment?**
   **A.** Not really. Tests and quizzes are an evaluation of learned material. Assessment involves a sample of behavior from your student that can be observed and judged on the basis of specific criteria developed and assessed in multiple modes and contexts of the learning process. For example, a project, presentation, a number of writing assignments, labs, and more. Traditional testing methods are limited measures of student learning and of limited value for guiding student learning. We can’t just say that 73% of our students are getting A’s and B’s, so we must be doing okay. A letter grade itself does not give enough information about the learning that is occurring.

3. **Q. Are not student learning outcomes specific tasks that the student will perform?**
   **A.** No, not tasks. Student learning outcomes are generic abilities that can be developed/improved and assessed. (See the Glossary for terms – competency vs. learner-centered outcome)

4. **Q. What is an outcomes-based course?**
   **A.** An outcomes-based course is supported with multiple learning opportunities for the student to achieve the learning outcomes.

5. **Q. What is the syntax of pedagogy?**
A. Student learning outcomes, taxonomy, assessment – for each learning outcome the faculty will develop/provide at least three assessments with measurements, more specifically, opportunities for the students to learn with meaningful feedback.

6. Question: When we validate program outcomes (3-year cycle) at NCTA, aren’t we assessing individual students?
   Answer: No. We are assessing programs and program outcomes. We want to determine how well our programs are actually achieving what they profess to achieve. Program outcome validation seeks to determine if program and general education outcomes are appropriate to meeting current academic, business, trade and/or professional/technological standards.

7. Question: How does assessment FOR learning help faculty?
   Answer: It provides teachers with useful information about their students, including the quality of learners and readiness for learning. Ongoing assessment informs the teachers about the pace and progress of student learning in their classroom.

8. Question: Is this something extra for me to do? Who should be doing assessments?
   Answer: No, it’s not extra. You’re already assessing. It’s those learning opportunities that you have designed in your curriculum where you can give your students on-going feedback so that they can improve learning. Only faculty who guide the learning process can identify the student learning outcomes of that process, what it is they expect to happen to/for the student. It is the faculties who teach in that program, interpret the results, and recommend improvements in pedagogy and curriculum.

9. Question: How can I assess attitudes and understanding what are simply not quantifiable?
   Answer: It seems a common misunderstanding that assessment requires that everything be reduced to statistical measures. The thrust of assessment is objective results such that anyone will know that the learning goals are being met; but this need not be quantifiable. If the faculty identify as an important result that which is not quantifiable, the process simply asks them to specify some objective means to demonstrate that the results are happening as intended.

10. Question: Do student assessment information results affect faculty evaluation?
    Answer: No. We’re focusing on the classroom level. Assessment is informed by the expertise and professional judgment of the faculty. Faculty in an academic division or program, interpreting the results of an assessment measure, might collectively decide to give more attention to certain outcomes, and might even recommend changes in pedagogy.

11. Question: Why is the Higher Learning Commission making us assess?
     Answer: Right now, higher education is concerned with two national issues: the learning college and accountability. Most faculty have been engaged in some type of
assessment throughout their teaching career and have found it to be a tool for understanding what their students are learning.

12. Q. Are adjunct faculty involved?
   A. Yes, by all means. All faculties, full and part-time, are involved in student learning. We have many creative and dedicated adjunct faculties at NCTA.

13. Q. What is the connection among the various levels of assessment?
   A. The focus of assessment is student learning. The most significant educational interaction happens between students and faculty in the classroom. The individual class section is part of a course, and courses are parts of programs. These levels reflect different, yet interrelated, facets of a student’s education.

14. Q. How will assessment improve learning?
   A. Assessment is a tool. However, it is a tool by which we can communicate with our students about learning with learning opportunities and ongoing feedback. Assessment does not accomplish learning – but it provides information to the student and the faculty who may use it to improve learning.

15. Q. How does classroom assessment relate to program/discipline assessment, and how does program/discipline assessment fit in with the College’s overall assessment efforts?
   A. Classroom assessment involves assessing student learning in a particular course. This can be accomplished using Classroom Assessment Techniques (CATs), which are quick, ungraded, classroom assignments used to provide feedback for determining student understanding of particular lessons. It is an ongoing process with the primary purpose of improving course-level instruction and student learning.

   This is accomplished through an annual process where each program/discipline designs and implements an Assessment Plan, measures learning outcomes, analyzes the data collected, communicates the information, and uses these results to develop an action plan aimed at improving student learning.

   College assessment efforts include classroom assessment, program/discipline assessment, and assessment of general education. The goal of assessment of student learning at NCTA is to improve student learning and support the College in fulfilling its educational mission. Assessment provides evidence of how well NCTA is meeting its mission and helps identify areas for improvement.

16. Q. How many faculty of a given program should participate in the assessment process?
   A. All faculties, both full time and adjunct, should participate in assessment. All have a stake in the success of their respective program or discipline.
17. Q. Does an Assessment Plan have to be prepared for each course within a program/discipline or within a sequence of courses?  
A. No, only one assessment plan is required for an entire program/discipline or sequence of courses. This plan should reflect the cumulative learning outcomes for the students in the course. Nonetheless, to achieve this goal, a particular course within a program/discipline may become the focus of the Assessment Plan.

18. Q. What’s the purpose of Program Validation?  
A. In campus statements of mission and goals, we have committed to providing our students with excellence in student learning and preparation to meet the world. Validation reveals our linkages between programs and the community it serves. Validation contributes to planning for the future of our programs. Altogether, it promotes campus wide understanding of the contributions of each program to the mission of the college.

19. Q. How does faculty within a division identify student-learning outcomes?  
A. Some learning outcomes can be mandated by outside agencies or advisory boards. Others are identified through discussion among faculty who have tried to answer the question of what knowledge or skills their students should demonstrate upon exiting the course or program. Learning outcomes inform our curriculum, teaching, and assessment.

20. Q. Who chooses lead instructors for assessment in the division/discipline?  
A. This is a divisional decision. Typically the division chair would make this decision in conjunction with the Associate Dean.

21. Q. Where do lead instructors or division chairs submit their assessment plans?  
A. Plans are submitted to the NCTA Assessment Committee.

22. Q. Where can we get help for developing an assessment plan?  
A. The Assessment committee is here to help. There are a number of individual members of the Assessment Committees who, through research, attending conferences, and hands-on experiences, have gained expertise with assessment of student learning. The committee as a whole and these individuals will be glad to do what they can to help.

23. Q. What is a program outcome?  
A. Think about what your students will need to be able to DO “out there” (in the rest of life) that you are responsible for in your program?”  
When developing your program outcomes, encompass several levels of learning through the learning sequence of the program. One program outcome will
encompass more than one course. Look at the big picture, not tiny details of skills that could be checked off.

24. Q. **What’s the difference between assessment and evaluation?**  
   A. See the chart that shows the differences (Assessment and Evaluation, p. 25)

25. Q. **What’s the difference between an objective and an outcome?**  
   A. **Objectives** describe skills, tools, and content that enables a student to achieve the outcome. **Objectives are teacher-centered.** Objectives may be impossible to assess because they can often be numerous, specific, and detailed.

   **Outcomes** describe the overarching product(s) that students will generate by applying skills, tools, and content. **Outcomes are learner-centered.** Outcomes require the use of higher-level thinking such as analysis, synthesis, and evaluation in order to demonstrate the student’s ability to apply the skills, tools, and content in authentic contexts.

   **Outcomes** can be assessed. They are products that can be observed as a behavior, attitude, skills, or discrete useable knowledgeable and can be measured against criteria (rubric, checklist, Likert scale, survey).

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**Assessment and Evaluation**

**Assessment** is the analysis and use of data by students, faculty, and/or division to make decisions about improvements in teaching and learning.

**Evaluation** is the analysis and use of data by faculty to make judgments about student performance. Evaluation includes the determination of a grade or a decision regarding pass/fail for an individual assignment or a course.
### Examples

<table>
<thead>
<tr>
<th>Assessment</th>
<th>Evaluation</th>
</tr>
</thead>
<tbody>
<tr>
<td>A faculty member provides feedback to a student regarding performance on an examination. The student uses that feedback to study differently in order to improve learning and performance.</td>
<td>A faculty member corrects an examination and assigns a grade of 82% to a student.</td>
</tr>
<tr>
<td>A team of faculty members analyze examination results of all students in a course and discovers that 65% of the students did not demonstrate understanding of an important concept. Faculty members investigate possible causes and plan changes in teaching/learning strategies to improve student understanding.</td>
<td>Pop quizzes are given in a class to determine if students have read sections of the text that cover important concepts. Simple Pass/Fail grades are assigned and tallied at the end of the term. The quizzes count for 5% of the total grade.</td>
</tr>
<tr>
<td>A student delivers an oral presentation in class. The faculty member provides a critique of delivery and content so that improvements may be made in the student’s subsequent presentations.</td>
<td>A student delivers an oral presentation in class. The faculty member provides a critique of delivery and content accompanied by a grade for the assignment.</td>
</tr>
<tr>
<td>A faculty member analyzes the results of oral communication checklists completed for all students in the course section who delivered oral presentations in class in order to determine opportunities for improving teaching and learning.</td>
<td>An Allied Health faculty member uses a rating scale to assign numbers (1-4) that indicate the level of achievement of clinical criteria based on observation of a student’s performance of patient care.</td>
</tr>
<tr>
<td>The class attendance record indicates that a student has been absent multiple times. The faculty member advises the student in order to facilitate improved attendance, as studies suggest that regular class attendance contributes to student success.</td>
<td>Points are deducted from a student’s grade for each class absence in accordance with a division policy.</td>
</tr>
<tr>
<td>Students are videotaped interacting with the children in the Early Childhood Education Centers. They view their videotapes and develop self-assessment narratives in which they describe and evaluate their performances. They then develop specific plans for improvement.</td>
<td>Students are videotaped interacting with children in the Early Childhood Education Centers. A faculty member evaluates each videotaped performance based upon course criteria and assigns a letter grade.</td>
</tr>
<tr>
<td>A student reads another student’s essay and gives feedback on the content and correctness of the essay as a way to improve the writing.</td>
<td>A faculty member reviews a student peer reader’s feedback and assigns a point value to the documentation to indicate satisfactory completion of the assignment.</td>
</tr>
</tbody>
</table>

Created by Sinclair Community College, Dayton, Ohio.
General Education Outcomes

From these goals, divisions /programs will identify which courses will address these goals. The syllabi for each course will state the designated goal with measurable learning outcomes and the approach by which the learning outcome will be identified.

Mission Statement for General Education
The mission of the General Education Division is to provide broad intellectual knowledge, awareness, and critical thinking skills in the liberal arts, humanities, and natural and social sciences directed toward the successful pursuit of students’ personal and career goals as citizens and leaders in agriculture enterprises.

Philosophy
General education is part of the academic experience that builds students’ growth as citizens and professionals. General education instruction engages students in independent, critical, and creative thinking; promotes open-mindedness and understanding; gives confidence and inquisitiveness to challenge assumptions and explore ideas and values; promotes the passing of sound judgment; encourages the consideration of ethical and practical consequences of actions; and facilitates wisdom.

NCTA General Education Learning Outcomes and Definitions

1. Written Communication. Written communication is the development and expression of ideas in writing. Written communication involves learning to work in many genres and styles. It can involve working with many different writing technologies, and mixing texts, data, and images. Written communication abilities develop through iterative experiences across the curriculum.

2. Oral Communication. Oral communication is a prepared, purposeful presentation designed to increase knowledge, to foster understanding, or to promote change in the listeners’ attitudes, values, beliefs, or behaviors.

3. Quantitative Literacy. Quantitative Literacy (QL) – also known as Numeracy or Quantitative Reasoning (QR) – is a “habit of mind,” competency, and comfort in working with numerical data. Individuals with strong QL skills possess the ability to reason and solve quantitative problems from a wide array of authentic contexts and everyday life situations. They understand and can create sophisticated arguments supported by quantitative evidence and they can clearly communicate those arguments in a variety of formats (using words, tables, graphs, mathematical equations, etc., as appropriate).

4. Problem Solving. Problem solving is the process of designing, evaluating and implementing a strategy to answer an open-ended question or achieve a desired goal.

5. Civic Engagement. Civic engagement is "working to make a difference in the civic life of our communities and developing the combination of knowledge, skills, values and motivation to make that difference. It means promoting the quality of life in a community, through both political and non-political processes." (Excerpted from Civic Responsibility and Higher Education, edited by Thomas Ehrlich, published by Oryx Press, 2000, Preface, page vi.) In addition, civic
engagement encompasses actions wherein individuals participate in activities of personal and public concern that are both individually life enriching and socially beneficial to the community.

6. **Critical Thinking.** Critical thinking is a habit of mind characterized by the comprehensive exploration of issues, ideas, artifacts, and events before accepting or formulating an opinion or conclusion.

7. **Information Literacy.** The ability to know when there is a need for information, to be able to identify, locate, evaluate, and effectively and responsibly use and share that information for the problem at hand. – Adopted from the National Forum on Information Literacy.
Glossary of Operational Terms

**Academic Achievement**: Student performance of program and general education outcomes; measured by various assessment methods pertaining to the stated outcomes.

**Assessment**: Assessment is an ongoing process, aimed at improving student learning and quality educational programs. It involves developing criteria and high standards for learning; systematically gathering, analyzing, and interpreting evidence to determine how well performance matches those expectations and standards; and using the resulting information to document, explain, and improve learning.

**Benchmark**: A description or example of student or institutional performance that serves as a standard of comparison for evaluation and judging quality.

**Bloom’s Taxonomy of Cognitive Objectives**: Six levels arranged in order of increasing complexity (1=low, 6=high)

1. Knowledge: Recalling or remembering information without necessarily understanding it. Includes behaviors such as describing, listing, identifying, and labeling.
2. Comprehension: Understanding learned material and includes behaviors such as explaining, discussing, and interpreting.
3. Application: The ability to put ideas and concepts to work in solving problems. It includes behaviors such as demonstrating, showing, and making use of information.
4. Analysis: Breaking down information into component parts to see interrelationships and ideas. Related behaviors include differentiating, comparing, and categorizing.
5. Synthesis: The ability to put parts together to form something original. It involves using creativity to compose or design something new.

**Capstone Course**: A capstone could be a senior seminar or designated assessment course where program learning outcomes can be integrated into assignments.

**CATs**: Classroom assessment techniques are usually non-graded methods used in the classroom (little class time is taken) to ascertain whether or not students have achieved a course objective or how much prior knowledge students have of a concept. These methods include a minute paper, muddiest point, confidence survey, and a paper prospectus. They can only be used in an assessment program if the method used directly addresses a program or general education outcome (not course objective) and a detailed observation can be made or quantified for future reference and comparison. (Classroom Assessment Techniques, 1993).
**Classroom Assessment**: The system and on-going study of what and how students are learning in a particular course often designed by individual faculty who wish to improve their teaching of a specific course. Classroom assessment differs from tests and other forms of student assessment in that it is aimed at improved student learning and course improvement, rather than at assigning grades.

**Closing the Loop/Feedback Loop**: Closing the loop is the process by which assessment results are used in programmatic and campus-wide decisions to impact student learning. In other words, it provides data/evidence for decisions for changes in pedagogy and curriculum – taking relative feedback and doing something with it.

**Community**: A community is the collaboration and inquiries among individuals to share ideas, find solutions, and build innovations regarding student learning.

**Competency-Based Assessment**: An assessment of a student’s performance/competency as compared to a specific learning outcome or performance standard. Competencies are assessed by the instructor to prove competence in isolated tasks; for example, do a minimum number of tasks; minimum level of proficiency. These can be assessed by demonstration and check-off in the classroom or lab when the student is ready.

**Content-Based Assessment**: The purpose is to assess knowledge in a content framework by assigning a grade and identifying top students. It is assessed by the class (curve) or the instructor (%) by a standard determined by the instructor or test developers using a quiz or objective test weekly, midterm, final, etc.

**DACUM: Developing Curriculum**: The DACUM process for occupational analysis involves local men and women with reputations for being “top performers” at their jobs, working on a short-term committee assignment with a facilitator. Workers are recruited directly from business and industry. These workers become the Panel of Experts who collectively and cooperatively describe the occupation in the language of the occupation.

The Panel works under the guidance of a facilitator for two days to develop the DACUM Research Chart. The chart contains a list of general areas of competence called DUTIES and several TASKS for each duty. Brainstorming techniques are used to obtain the collective expertise and consensus of the committee. As the Panel determines each task, it is written on a card. The cards are attached to the wall in front of the Panel. The completed chart is a graphic profile of the duties and tasks performed by successful workers in the occupation.

The Panel also identifies the general knowledge and skills required of successful workers; the tools, equipment, supplies, and materials used, the important behaviors essential for success, and the future trends and concerns likely to cause job changes. The process produces superior results for all occupational levels.
**Direct Assessment Methods**: Assessment that requires students to display their knowledge and skills as they respond to the instrument itself. These methods include licensure test results; capstone course portfolios, presentations, and entry and exit test results. Objective and performance measures are both types of direct assessment methods. Direct assessment may also be quantitative (numerical scores) or qualitative (descriptions).

**Embedded Questions to Assignments**: Questions that are related to program learning outcomes are embedded within course exams. It is a means of gathering information about student learning that is built into and a natural part of the teaching-learning process. It is often used for assessment purposes in classroom assignments that are evaluated to assign students a grade. This process can assess individual student’s performance or aggregate the information to provide information about the course or program; can be formative or summative, quantitative, or qualitative. Example: as part of a course, expecting each senior to complete a research paper that is graded for content and style but is also assessed for advanced ability to locate and evaluate web-based information.

**Evaluate/Evaluation**: Definition 1: Evaluation uses assessment information to make an informed judgment on such things as: whether students have achieved learning goals that we’ve established for them; the relative strengths and weaknesses of our teaching/learning strategies; or what changes in goals and teaching/learning strategies might be appropriate. Assessment results alone guide us; evaluation forms our decisions. Definition 2: Evaluation is used to investigate and judge the quality or worth of a program, project, or other entity, rather than student learning. Under this definition, evaluation is broader than assessment.

**Formative Assessment**: Assessment that takes place so that feedback can be given prior to the completion of the performance (program), which enables the student to modify and improve the student performance (program).

**Goals**: Goals are general aims or purposes of a program and its curriculum. Effective goals are broadly stated, meaningful, achievable, reachable and timely. Goals provide a framework for determining the more specific educational outcomes of a program and should be consistent with program and institutional mission. Goals are what we “wish” for our programs and students. Goals require outcomes to provide evidence of how to reach the goal.

**Grades**: A mark that signifies the overall rating of student performance on an assignment. It is comprehensive in that it includes the rating of all student work on the assignment; it cannot be used as a method of assessment as it does not specifically pertain to a single objective; however, individual Performance Assessment Tasks (PATs) used to assess specific outcomes can be aggregated into a grade.

**Indirect Assessment Methods**: Assessment that requires students to reflect upon their learning rather than demonstrating what has been learned. Surveys; interviews; number of students
successfully transferring; graduation rates; placement data; advisory committee evaluation; and feedback from students, graduates, or employers are typical indirect methods.

**Matrices (Formative and Summative (F&S Charts))**: Matrices are used to summarize the relationship between program outcomes and courses, course assignments, or course syllabus outcomes to examine congruence and to ensure that all outcomes have been sufficiently structured into the curriculum.

**Mission Statement**: The mission statement is the initial point of reference for a program. It is a brushstroke statement (not measurable) of the general values and principles which guide the curriculum and the larger context in which more specific curricular goals will fit. In broad terms, it is your program’s vision that will set a tone and philosophical position of what you do, for whom you do it, and how you will get it done.

It addresses the following questions:

1. What are the general values and broad principles that will guide the program?
2. What are the general characteristics and abilities of the ideal graduate?
3. Whom will the program serve and how?
4. In what specific ways is the program mission consistent with the college’s mission and strategic plan?

**Objectives**: Objectives describe what learners will be able to do at the end of instruction, and they provide clear reasons for teaching. When writing objectives, be sure to describe the intended result of instruction, rather than the process of instruction itself.

**Observations**: Observations can be of any social phenomenon, such as student presentations, students working in the library, or interactions at student help desks. Observations can be recorded as a narrative or in a highly structured format, such as a checklist; and they should be focused on specific program outcomes.

**Outcomes**: Program outcomes are the knowledge, skills, and abilities students should possess when they graduate from a program. They are answers to the question, "What should program graduates know and be able to do at the time of program completion?"

When thinking about program outcomes, it might be helpful to consider where program graduates should be within three to five years of graduation. Should they be practitioners in the profession of the discipline? Should they have entered the work force prepared for entry-level jobs? Should they be in a graduate or professional degree program? Should they have passed a licensure or certification exam in the field? The answers to questions such as these can help program faculty focus on the knowledge, skills, and abilities that will best prepare students for their next educational or professional endeavors.
**Performance Criteria:** Student learning outcomes need to be measureable. Ask, “What are the conditions for achievement? How will we know the project, task, lab, and report development was successful?” This is not a number or percentage. Develop a narrative.

**Portfolio:** A portfolio is a systematic and organized collection of a student’s work that exhibits to others the direct evidence of a student’s efforts, achievements, and progress over a period of time. The collection should involve the student in selection of its contents, and should include information about the performance criteria, the rubric or criteria for judging merit, and evidence of student self-reflection or evaluation. It should include representative work, providing a documentation of the learner’s performance and a basis for evaluation of the student’s progress. Portfolios may include a variety of demonstrations of learning and have been gathered in the form of a physical collection of materials, videos, CD-ROMs, reflective journals, etc.

**Primary Trait Analysis (PAT):** PAT is a rubric that specifically addresses desired outcomes and scores the achievement of those outcomes using a detailed description of the degree to which the outcome has been achieved.

**Program and General Education Outcomes Validation:** This step of the process seeks to determine if program and general education outcomes are appropriate to meeting current academic, business, trade, and/or professional/technological requirements. A well-executed program outcome validation study will answer the question:

“Are the program outcomes consistent with expectations of employers, transfer institutions, entering students, and the communities of interest?” Program Outcomes Validations studies are required of all programs every three years.

**Program Assessment:** A combination of assessments techniques, data collection and analysis about student achievement for learning outcomes at the classroom and course level, and leading to improvement of the academic program.

**Reliability:** Reliability insures that the instrument or results from the instrument measure the desired outcome consistently over time.

**Scoring Rubrics:** A rubric describes a specific set of criteria that clearly defines for both student and teacher what a range of acceptable and unacceptable performance looks like. Criteria define descriptors of ability at each level of performance and assign values to each level. Levels referred to are proficiency levels which describe a continuum from excellent to unacceptable product that delineates criteria used to discriminate among levels is developed and used for scoring. Generally two raters are used to review each product and a third rater is employed to resolve discrepancies.

**Student Learning-Centered Outcome (SLO):** The purpose of SLO is to increase learning by demonstrating evidence of intended outcomes. Learner-centered describes up front what the
student will be able to DO (in the rest of life) with what he learns in a course or program. The students will engage in meaningful work projects, portfolios, presentations, exhibits, etc., that require synthesis of understanding and skill development and are assessed by students, peers, instructor, stakeholders, with clearly identified qualitative criteria. LCO is assessed priorly, continuously, and summatively. While some believe competencies and outcomes to be the same things, they are not. The intended learning outcomes justify the course content. They give it purpose beyond learning content for the sake of content.

Examples of Outcomes:

- **Math**: compute using arithmetical, algebraic, geometric, and statistical methods to solve problems.

- **Ethics**: Analyze real world ethical problems or dilemmas and identify those affected by the dilemma.

- **Culture and Equity**: Describe the concepts of power relations, equity, and social justice and find examples of each concept in the US society and other societies.

- **Team work**: Listen to, acknowledge, and build on the ideas of others.

**Summative Assessment**: The gathering of information at the conclusion of a course, program, or undergraduate degree to improve learning or to meet accountability demands. When used for improvement, impacts the next cohort of students taking the course or program. Example: examining student final exams in a course to see if certain specific areas of the curriculum were understood less than others.

**Triangulation**: Triangulation involves the collection of data via multiple methods in order to determine if the results show a consistent outcome.

**Validity (validation)**: Validity refers to outcomes or instruments that are well grounded and are based upon evidence or fact.
**Yearly Assessment of Intended Learning Outcomes for Student Achievement**

**Assessment** is a method for faculty to collect feedback on how well students are learning. The purpose of assessment is to provide faculty and students with information and insights needed to improve student learning, teaching strategies, and curriculum. Assessment can be fun and most importantly, puts the responsibility of learning squarely on the student. It also opens a dialogue between the faculty and the student on the teaching/learning process. Overall, assessment is a process of self-reflection with an outlook towards improvement.

Faculty provides continuous feedback to students to help students improve their learning strategies and study habits so that they can become more independent, successful learners. The conversations between and among faculty, students, and other stakeholders provide an excellent way to share best practices.

**Continuous Improvement for Student Learning Through a Culture of Evidence, Inquiry, Teaching and Learning**

1. **PLAN** – Identify intended Learning Outcomes and Benchmarks
2. **APPROACHES** – Identify measures selected for program and General Education Outcomes
3. **DATA** – Gather, exhibit, and present on projects or information gained
4. **SHARE** – Review and discuss data
ANNUAL Student Learning and Success PLAN

1. All divisions/programs will assess the seven general education outcomes during the academic year.

2. Identify the course(s) or sequences of courses in the curriculum that assess each of the outcomes selected for the assessment period.

3. Identify the tools such as industry certifications testing, formative/summative assessment instruments, final projects, site supervisor evaluation of student performance, portfolio review, or other means the division currently uses. For example, course assignments, labs, rubrics, portfolios, etc.

   a. Verify that selected assessment methods are valid and reliable tools for documenting student academic achievement

   b. Ensure that fulltime and adjunct faculty who are teaching the same courses are using the same or equivalent assessment tools.

4. Determine the program/division standard (benchmark) for student academic achievement for each outcome and assessment method.

Benchmarking:
A minimum performance level that students are expected to achieve. Although a benchmark is expressed as a percentage, the percentage does not translate to a letter grade. (For example, seventy-five percent (75%) does not translate to a grade of “C”.) The benchmark is the number of students who successfully achieved the program and/or course outcome.

Example:
Track: Network Administrator
Learning Outcome: Determine project requirements of a computer network system.
Benchmark: 75%
Framework: Seventy-five (75%) of the students should be able to perform this task.
   If the percentage is significantly lower than 75%, re-evaluate teaching strategies, curriculum, and assessment instruments. If the division achieves 75%, the above could still be re-evaluated for ongoing improvement.
Review and Analysis

These are the general steps to be used for the development and assessment of student learning outcomes at NCTA:

1. **Develop program level student learning outcomes.** Program level student learning outcomes are the knowledge, skills and values that students graduating from this program should possess. Generally, faculty meets with an advisory group to develop program level student learning outcomes. The advisory group consists of disciplinary experts, industry leaders, external faculty, and others with knowledge of the field. In disciplines with disciplinary accreditation, such as veterinary technology, the accrediting body determines what the student learning outcomes will be. Programs generally have 15 to 20 program level student learning outcomes, although this can be variable. The process used to develop program level student learning outcomes should be documented and the results should be reevaluated on a regular basis.

   Program review is the formal method for evaluating program level student learning outcomes. Program level student learning outcomes should be available on the college website.

2. **Assign program level student learning outcomes to specific courses** at the college. This is generally done by developing a curriculum map or matrix which lists program level student learning outcomes along one axis and department courses along the other axis. A checkmark in the matrix then indicates which courses cover each program level student learning outcome. The curriculum map for each program should be available on the college website.

3. **Faculty teaching individual courses are responsible for the student learning outcomes** that have been assigned to their courses. Faculty may decide to add additional student learning outcomes at their discretion. Each course should generally have **two student learning outcomes per credit** (for example, a three credit course would have six student learning outcomes) although this may be variable, based on instructor needs. Course level student learning outcomes should be listed in the syllabus for each course.

4. Faculty is responsible for selecting activities and facilitating an environment, which results in student attainment of the student learning outcomes. Often, this involves activities such as lectures, assigned readings, laboratory activities, appropriate demonstrations, course discussions, student projects, guest lecturers, etc.

5. Faculty identifies one objective, direct measure for each student learning outcome and a benchmark of success for each outcome. Often faculty use rubrics to assess student learning outcomes. A rubric is defined as "a document that articulates the expectations for an assignment by listing the criteria, or what counts and describing levels of quality from excellent to poor" (from http://rubistar.4teachers.org/, a free rubric development website). Three examples of the relationship between a student learning outcome and a rubric are
presented as an appendix to this document.

6. An indirect measure of each student learning outcome will be determined by asking for student feedback on student learning outcomes attainment as part of the course evaluation process. A report is generated each semester summarizing the results of this indirect assessment of student learning outcomes. Division chairs will meet with faculty and discuss intervention strategies for those student learning outcomes with an average indirect measure below 3.0 on a five-point scale.

7. Each semester, faculty report student learning outcomes assessment. The report conforms to the college template and contains:
   a. The list of student learning outcomes by course
   b. The assessment measure used for each student-learning outcome
   c. Assessment results — student progress towards achieving the student learning outcome
   d. An explanation of how the results are used to improve student learning in subsequent semesters

8. SLO reports are due by January 15 for fall semester courses and by June 15 for spring semester courses. All assessment plans and reports are available on the NCTA assessment webpage - http://ncta.unl.edu/assessment

9. The course reports are compiled and submitted to the division chair as part of the faculty member's annual evaluation process.

10. Division chairs evaluate student learning outcomes results and assist faculty in improving outcomes, if necessary. Division chairs may direct faculty to the NCTA Assessment Committee for additional assistance.

11. Summary reports. The NCTA assessment committee will be responsible for developing an annual report which documents the number of SLO's assessed, the number of SLO's which ranked below three on the indirect measure, and the percentage of courses which were assessed for SLO's. This document will be maintained on the assessment webpage.

12. NCTA academic divisions will update their curriculum maps each summer with final edits being completed by July 15 of each year.
INSTITUTIONAL OVERSIGHT:

The NCTA Assessment Committee is responsible for decisions regarding the development, support and implementation of the institutional assessment system and the monitoring of the quality of assessment activity of academic and co-curricular programs. The NCTA Assessment Chair is responsible for coordinating all aspects of campus assessment, including efforts associated with institutional learning outcomes and curricular programs. The chair assists units, as needed, with planning, designing, implementing, analyzing, reporting and disseminating assessment results. The chair promotes best practices in assessment and delivers regular assessment training for campus stakeholders.

BACKGROUND INFORMATION (for additional information, see The National Institute for Learning Outcomes Assessment at http://learningoutcomesassessment.org)
Assessment for Student Learning
Proposed Reporting Checklist (for use of the program/discipline)

1. Does the program have a clearly stated mission that is consistent with the NCTA mission statement?

2. Does the program have clearly articulated general goals?

3. Does the program have specific, measurable program-level learning outcomes?

4. Are the program components (course, sequence of courses, related experiences) aligned with these learning outcomes?

5. Has the program assessed some of the defined program learner-centered outcomes?

6. Has the student been provided with multiple learning experiences to show evidence of learning – beyond objective teaching?

7. Has the program assessed some of the defined program learner-centered outcomes?

8. If yes, are the methods used to assess student learning direct, indirect, or both?

**Note:** Direct measures such as standardized tests, rubric scored projects or papers, embedded questions in classroom tests and assignments, and agency scoring of interns or graduates is preferred over indirect measures (i.e., surveys, interviews, etc.)
### Bloom's Taxonomy

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>Comprehension</th>
<th>Application</th>
<th>Analysis</th>
<th>Synthesis</th>
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<td>Demonstrate an understanding of the facts</td>
<td>Apply knowledge to actual situations</td>
<td>Break down objects or ideas into simpler parts and find evidence to support generalizations</td>
<td>Compile component ideas into a new whole or propose alternative solutions</td>
<td>Make and defend judgments based on internal evidence or external criteria</td>
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Assessment Model

Template

NCTA PROGRAM NAME Program Assessment

PROGRAM NAME Program Assessment links
PROGRAM NAME Mission Statement
PROGRAM NAME Philosophy Statement
PROGRAM NAME Assessment Plan
Learning Outcomes & Objectives
PROGRAM NAME Rubrics
Course/Program Experience Outcome Matrix
Outcomes Data
Data Based Decisions & Outcomes Feedback

PROGRAM NAME Mission Statement

PROGRAM NAME Philosophy Statement

PROGRAM NAME Assessment Plan

Student Input into the Assessment
  •
Curriculum Assessment
  •
Student Performance Assessment
  •
Learning Outcomes & Objectives
Outcomes
Associate of Applied Science Objectives

Nebraska College of Technical Agriculture

Curtis, NE
Associate of Science Objectives

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IANR Priorities
Priority 1: The life sciences, ranging from molecular to global systems.
Priority 2: Sustainable food, fiber and natural resource systems that support a bio-based economy.
Priority 3: Economics and environments for a sustainable future.
Priority 4: Human capital development of children, youth and families.

NCTA Values
Dedication to student development
Demonstration of personal integrity and responsibility
Practical and applied educational activities
Student engagement in the learning process
Commitment to seek and teach the most recent and accurate academic information
Educational activities that lead to student lifelong learning and gainful employment
Respect for the contributions, perspectives and personal worth of all members of the college community

NCTA PROGRAM NAME Learning Outcomes and Definitions¹

*Intellectual and Practical Skills*

*Personal and Social Responsibility*

*Integrative and Applied Learning*
**PROGRAM NAME** Rubrics for Program-Level Outcomes  
Course and Program Experience and Outcomes Matrix

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“X” for courses or experiences in which student performance is used for program level assessment of the outcome.

1. Quiz  
2. Exam  
3. Essay  
4. Report  
5. Portfolio  
6. Oral Report  
7. Exercises  
8. Project  
9. Lab  
10. Reading, research, and discussion/debate or Socratic dialogue/giving of reasons and evidence  
11. Journaling  
12. Essential Skill Record Book  
13. Internship Progress Notes  
14. Student Teaching  
15. Practical Exams
Course and Program Experience and Outcomes Matrix

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“X” for courses or experiences in which student performance is used for program level assessment of the outcome.

1. Quiz
2. Exam
3. Essay, proposal, or position paper
4. Research paper or report
5. Portfolio
6. Oral report or presentation
7. Exercises
8. Project
9. Lab
10. Reading, research, and discussion/debate or Socratic dialogue/giving of reasons and evidence
11. Journaling
12. Essential Skill Record Book
13. Internship Progress Notes
14. Student Teaching
15. Practical Exams
Linking General Education Outcomes to Programs

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“X” for courses or experiences in which student performance is used for program level assessment of the outcome.

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8 Project
9 Lab
10 Reading, research, and discussion/debate or Socratic dialogue/giving of reasons and evidence
11 Journaling
12 Essential Skill Record Book
13 Internship Progress Notes
14 Student Teaching
15 Practical Exams
Measurement Methods/Instruments

How do students demonstrate learning?

Institutional Planning & Alignment

Assessment Reporting & Tracking/Assessment Methods

Performance assessments are done in a variety of methods in the classroom. Students are graded on assessments such as:

- Essay
- Portfolio
- Project
- Exam
- Speech
- Skill activity
- Oral Report
- Lab

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Assessment Management/Program Insights

**PROGRAM NAME** Data Based Decisions (See Common Web Page)

Input from division/faculty  

Faculty will meet annually with the Dean during Academic Council to discuss the status of the program and milestones.

Input from Students  

End of course surveys will be compiled and reported annually.

Input on Student Performance  

Analysis of student success will be measured and recorded at the end of each academic year.

Input from Peer Institutions  

Faculty will visit peer institutions over the summer.

Input from Industry  

Faculty will meet with advisory council during the fall to evaluate industry needs and trends.

Input from University of Nebraska  

Faculty will discuss articulation and needs with the University of Nebraska College of Agriculture and Natural Resources (CASNR) each November.

**PROGRAM NAME** Outcomes Feedback

Action Statement  

Faculty will review the assessment and outcomes providing a mechanism that is course and program specific looped back to control the evolution of the program.