



Tulsa Community College

**Tulsa Community College Plan for
Student Learning Outcomes Assessment**

A Strategy for Continuous Improvement

Developed By

Tulsa Community College
Learning Effectiveness Council
Academic Year 2010

Tulsa Community College Learning Effectiveness Council**Academic Year 2010-11**

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Tulsa Community College

**Framing Document for
Student Learning Outcomes Assessment**

Prepared by:
Learning Effectiveness Council
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The Need for Student Learning Outcomes Assessment at Tulsa Community College

What is Outcomes Assessment?

Outcomes Assessment (OA) is the process of collecting information that will tell an organization whether the services, activities, or experiences it offers are having the desired impact on those who partake in them. In other words, is the organization making a difference in the lives of the individuals it serves?

In higher education, at its simplest, Outcomes Assessment has three stages:

1. **Defining** the most important goals for students to achieve as a result of participating in an academic experience (outcomes)
2. **Evaluating** how well students are actually achieving those goals (assessment)
3. **Using** the results to improve the academic experience (closing the loop)

Who Benefits from Outcomes Assessment?

One of the great advantages of Outcomes Assessment is that when done in a systematic way, it benefits people throughout the institution, from our students to the faculty to the administration.

For students, Outcomes Assessment will:

- communicate clear expectations about what's important in a course or program
- inform them that they will be evaluated in a consistent and transparent way
- reassure them that there is common core content across all sections of a course, certificate, and degree programs
- allow them to make better decisions about programs based on outcomes results

For faculty, participating in Outcomes Assessment will:

- help them determine what's working and what's not working in their courses or programs
- facilitate valuable interdisciplinary and intercampus discussions
- provide powerful evidence to justify needed resources to maintain or improve programs
- allow them to tell their story to individuals outside their area (e.g. administrators, politicians, employers, prospective students, transfer institutions)
- provide reassurance that all faculty teaching a particular high demand course agree to address certain core content

For administrators, implementing college-wide Outcomes Assessment will:

- demonstrate an institutional commitment to continually improving the academic programs and services offered by the College
- provide valuable data to support requests for funds from state and local government and private donors
- demonstrate accountability to funding sources
- provide valuable data for academic planning and decision-making
- enable them to inform elected officials, local businesses, and potential donors about the college's impact on our students and our community in a very compelling and convincing way

Finally, systematic Outcomes Assessment is now a **requirement for accreditation** by all higher education accrediting organizations. In fact, two of the Higher Learning Commission's criteria for accreditation speak directly to clearly stated learning outcomes (Criterion 3, Component A) and providing evidence of institutional effectiveness for continuous improvement (Criterion 2, Component C). The five criteria are built around the importance of creating a culture in which institutional effectiveness and student learning are highly valued by the college community.

Why aren't grades enough?

When faced with the news that your discipline will conduct Outcomes Assessment, it is tempting to ask why you can't just look at final grades to determine whether a course is successful. Although counting letter grades is easy, it provides neither consistent nor meaningful information about student success in a multi-section course. In Outcomes Assessment, the terms "scoring" and "grading" have different meanings. Scoring refers to the process of marking an assessment instrument to get data about how well the course has done at achieving its outcomes. Grading is the process of marking an assessment instrument for the purpose of assigning a student a grade for the course.

Scoring needs to be done consistently across all sections; grading can be done differently in each section if instructors desire. In no way does the Outcomes Assessment scoring process infringe on an instructor's grading. Unless every instructor teaching a particular course assigns final course grades in exactly the same way (same assignments, same exams, same weights, same grading approach), you cannot be confident that one section's A is the same as another section's A. More significantly, final grades are an aggregate assessment of a student's entire body of work for the course, often including attendance and class participation.

Grades do not provide:

- specific information about students' performance on discrete tasks
- meaningful data across sections for program outcomes

- objective student data which can be used for improvement of student learning or recognition of student achievement

It is critical, however, that students do not approach Outcomes Assessment assignments or exam questions thinking they are of no consequence, as they would likely not take them seriously, thus creating a false impression regarding the effectiveness of our courses. Regardless of how instructors assess student learning, they should make sure students earnestly engage in and understand the importance of completing any assignments associated with outcomes assessment.

TCC's Outcomes Assessment Approach Q & A

What values guide Tulsa Community College's approach to Outcomes Assessment?

1. Ultimately, every discipline and program should be expected to engage in Outcomes Assessment. Outcomes Assessment should not be performed only in selected academic areas of the College.
2. The results of Outcomes Assessment should be used to evaluate the effectiveness of academic programs and activities, and student services, and not the performance of individual faculty or staff
3. Outcomes Assessment should be as simple and manageable as possible. The process cannot become so onerous that it hampers or interferes with the delivery of the educational experience that it attempts to assess and improve.
4. Faculty must use the information collected to develop and improve academic programs, that is, they must "close the loop." If Outcomes Assessment is used primarily as a reporting tool, then this effort will have been deemed a failure.
5. Central and campus administrators must provide leadership and accountability to the process. Outcomes Assessment must be ongoing and performed on a regular basis within each academic area; it cannot be episodic. In essence, it must become an academic habit.

What is Tulsa Community College's Approach to Outcomes Assessment?

There is no one right way to implement Outcomes Assessment. Across the country colleges have proceeded in a variety of ways, each adopting an approach they feel is best suited to the circumstances of their institution. Tulsa Community College's process is similar to many colleges in our peer group, which classifies outcomes into two main categories: Student Learning Outcomes (SLO) and Student Progress Outcomes (SPO).

Student Learning Outcomes (SLO) directly describe what a student is expected to learn as a result of participating in academic activities or experiences at the College. They focus on knowledge gained, skills and abilities acquired and demonstrated, and attitudes or values changed. These, of course, are the outcomes that are of most interest to educators, but they

are also the most challenging to measure, and may require a number of iterations before the data collected are deemed valid and reliable.

Student Progress Outcomes (SPO), conversely, reflect student progress in course sequences; in transfer, certificate, and degree programs; in majors; and in workplace experiences after they leave Tulsa Community College. Although not directly descriptive of what a student has learned while at the College, SPO nonetheless provide indirect measures of student learning, as well as describing outcomes to our programs that the students themselves may consider to be most important.

Because of their immediate connection to assessing student learning, the primary emphasis of the current Outcomes Assessment process and this Assessment is **Student Learning Outcomes**.

What priorities guide our approach?

Our SLO assessment approach is guided by three priorities:

- directly involving *all* faculty who teach the course being assessed in the assessment process itself
- making the process as unobtrusive as possible in how faculty plan, manage, and deliver their courses
- maximizing potential sources of meaningful, useful data by assessing consistently

What are the Key Elements of the Outcomes Assessment Process that Honor these Priorities?

Courses should have a set of college-wide common core learning outcomes. Course outcomes are based on and mirror the student learning expectations agreed on by the discipline when the course was last approved by the College-wide Curriculum Committee. Faculty from the discipline are asked to agree on the most important learning outcomes, and will assess how well students meet these outcomes. This does not mean that faculty will be required to teach identical content across the entire course, nor does it dictate how faculty choose to deliver any of the course content to their students. What is expected is that during an assessment cycle, the same course outcomes will be assessed using the same methods regardless of where or how it is taught.

The entire discipline participates. Assessing learning outcomes for courses should be important to all faculty in the discipline. Therefore, the process is structured to engage all discipline faculty directly in the assessment activity, as well as in discussions related to the process. Although this approach may require more effort than sampling specific sections or simply soliciting volunteers, it is more equitable and the participation of all faculty results in a full appreciation of the importance of the core learning outcomes, the worth of assessing them, and the value of coming together for meaningful discussions about both.

Embed assessment instruments into the course. When assessing Student Learning Outcomes in a course, the easiest and least obtrusive way for faculty and students is to weave the assessment instrument (assignment, exam questions, etc.) into the course rather than have an obvious, add-on test or assignment that doesn't blend naturally into the course. In outcomes lingo, course-embedded assessments make use of the actual work that students produce in their courses. The assessments may simply select from work that students do in various courses or may be designed overtly for assessment purposes and then incorporated into the courses. The faculty members teaching the courses give grades to the students, but the work selected for assessment is evaluated based on Student Learning Outcomes.

Ensure consistency through common outcomes, common instrument, common scoring. Faculty members are not expected to teach every section of a multi-section course in exactly the same way. However, the best way to get meaningful and reliable results for Outcomes Assessment is to have consistency on both the outcomes being assessed and the method by which they are assessed. For this process, that means establishing a set of college-wide common core outcomes for a course assessing three of these in a given assessment cycle in all sections using a common instrument, and scoring the assessments using a common rubric or scoring approach.

Remove any incentive for individual faculty to bias the results in their favor. It is natural for faculty to be concerned about how assessment data about their students will be reported and used. The College, in a written statement endorsed by the Vice President for Academic Affairs, states unequivocally that data collected as part of this process will never be reported in a way that would allow it to be linked to an individual student or faculty member, and that assessment results will not be used in the faculty evaluation process. These guarantees, combined with the use of a common assessment instrument and scoring rubric, should remove any incentive to bias the assessment process.

Common Concerns about Outcomes Assessment

Throughout this plan, you will find information and advice on how to work through some potential stumbling blocks in the Outcomes Assessment process. In addition to these logistical concerns, some faculty members may be concerned about some of the following broader issues.

Does this process affect my academic freedom?

Nothing inherent in the Tulsa Community College Student Learning Outcomes Assessment process interferes or violates the academic freedom of the instructor. Assessing outcomes is simply about faculty determining whether students are learning those things they deem most important, and then using the information to make changes where appropriate. Nothing in the Tulsa Community College process dictates in any way how faculty choose to deliver the course content or how they grade their students. Requiring faculty, every few semesters, to use a

common instrument to assess three core course outcomes is far less prescriptive than asking faculty to use a common text, a common requirement in higher education.

Will this be more work for us?

To some degree yes, but we are committed to not allowing the Outcomes Assessment process to become burdensome in a way that will interfere with a faculty member's commitment to teaching. The vast majority of time faculty will commit to during this process will be confined to intra and inter-disciplinary discussions of what are the most important student outcomes, how these can best be assessed, and what improvements, if any, are suggested by the assessment results. Faculty may be given reassigned time to handle the technical aspects, e.g., data collection and analysis, for this process.

Will assessment information be used to evaluate faculty?

Absolutely not. This process is about assessing the effectiveness of programs, courses, and services, not individuals. In fact, mechanisms and guarantees have been put in place to ensure that the results will *never* be reported in a way that will permit them to be associated with any individual, faculty or student.

Isn't the primary purpose of Outcomes Assessment to find fault with things?

No, this is not about finding fault with programs, courses, or individuals; it is about agreeing on what is most important in our courses, communicating that to all stakeholders, and finding out what's working and what's not. Great assessment results can and should be used to trumpet success, market programs, motivate faculty and students, and justify increased resources. Less than satisfactory assessment results should lead to improvements in programs, courses, and services.

Will the results have complete statistical validity and will they be useful?

The short answers are no and yes. While the results will not have the kind of statistical validity or reliability that would make a statistics professor happy, they will most certainly be useful in the way this process intends – to give faculty members meaningful information about how their courses and programs are doing at achieving the goals they themselves defined. Achieving greater validity and reliability would require that a carefully selected random sample of papers be scored by a team of trained evaluators, thus minimizing the direct participation in the process by the vast majority of faculty. The Tulsa Community College assessment process makes a trade-off between complete statistical reliability and faculty involvement.

Isn't this just a slippery slope leading to standardized testing?

Absolutely, and unequivocally, not!! Such a direction has never even been contemplated by anyone involved with Outcomes Assessment at Tulsa Community College. For further reassurance, know that the Higher Learning Commission, strong advocates of Outcomes Assessment, does not advocate standardized testing.

Will the results determine whether my course remains in the General Education program?

The short answer is no. Student performance data for specific assessment projects will not affect whether a course remains a General Education course; however, demonstration of the degree to which individual courses support specific competencies as revealed through participation in the assessment of General Education competencies and areas of proficiency, will be a factor in maintaining General Education recognition.

Is this just another academic fad that will be gone in a couple of years?

Not likely. The Outcomes Assessment movement has been a serious one for at least a decade, and its momentum is growing not waning. Every higher education accreditation agency across the country now includes the assessment of learning outcomes as one of their highest priority criterion. The Higher Learning Commission emphasizes and requires the importance of creating a culture of Outcomes Assessment within the institutions it oversees.

Most Important Things to Remember About Outcomes Assessment at TCC

1. Outcomes Assessment improves student learning by systematically evaluating student performance on specific learning outcomes.
2. The Tulsa Community College Outcomes Assessment process is based on college-wide common core learning outcomes.
3. Outcomes Assessment at Tulsa Community College is faculty driven and course embedded.
4. It is an on-going, not episodic, process.
5. It is about evaluating the effectiveness of programs, courses, and services, not individuals.



Tulsa Community College

Student Learning Outcomes Assessment Implementation Plan

A Strategy for Continuous Improvement

Prepared by:
Learning Effectiveness Council
March 2010

Introduction and Overview

In the Report of a Visit, the HLC site evaluation team indicated that TCC's approach to assessment did not adequately meet the criteria for accreditation. The criteria state "The organization's ongoing evaluation and assessment processes provide reliable evidence of institutional effectiveness that clearly informs strategies for continuous improvement" and "The organization's goals for student learning outcomes are clearly stated for each educational program and make effective assessment possible." For many years, the college has used a course-embedded strategy (using the "assessment wizard") to assess student learning. As part of TCC's involvement in the HLC's Assessment Academy, several faculty and administrators recently developed a General Education Assessment at the co-curricular level. The co-curricular plan began in 2007 and yielded good data related to General Education, but it, too, did not satisfy the HLC's criteria. President McKeon, therefore, formed the Learning Effectiveness Council and charged the council with the task of creating a new, more comprehensive assessment plan that meets the HLC criteria.

The TCC Assessment Plan for Student Learning Outcomes has the following purposes:

1. To meet both state and the Higher Learning Commission, North Central Association's accreditation requirements.
2. To ensure that faculty have control over the student outcomes assessment process.
3. To collect evidence of student learning that faculty can use to support significant, meaningful improvements in program and course effectiveness.
4. To annually review Program Objectives and Course Performance Objectives for their clarity, consistency and relevance.

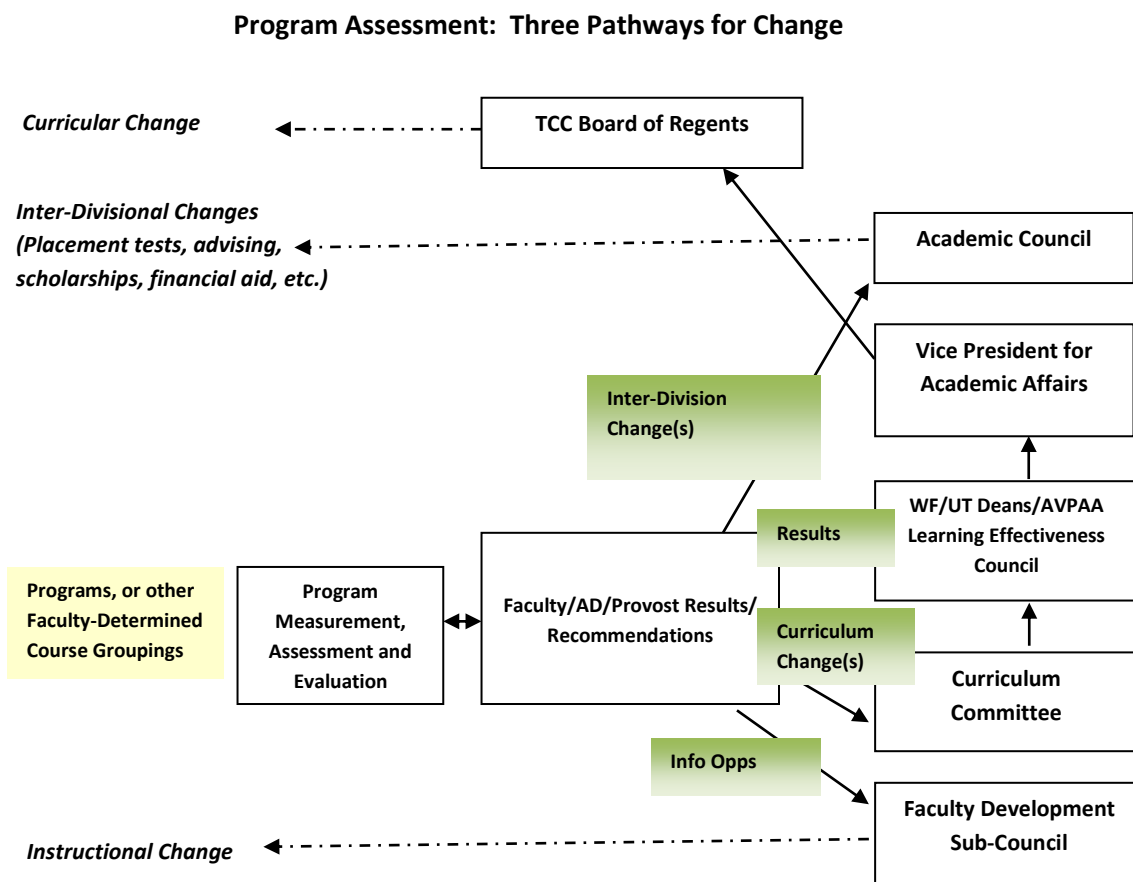
A fundamental requirement of any assessment plan is to state clearly what students are learning not only in specific classes but also as a result of completing several courses at a particular college. In other words, accrediting bodies want faculty to be clear and direct about what they want students to learn, and they want faculty to convey their expectations in the form of learning goals and objectives (see Assessment Glossary in Appendix). Goals and objectives, therefore, lie at the heart of the plan.

At TCC, faculty have identified four general education learning goals (critical thinking, effective communication, engaged learning, and technological proficiency). These are the learning expectations for all degree or certificate-seeking students enrolled in the college. Many faculty have also identified learning goals particular to their program or discipline; many have specific goals or objectives for the individual courses they teach. The General Education Goals support the college's mission and are in turn reflected in the goals and objectives of programs and courses. Therefore, TCC's mission and goals inform the assessment process and are inherent in the curriculum.

This plan asks faculty to develop strategies to assess the quality of learning at TCC from these three levels: general education goals, discipline/program goals, and course objectives. At every level, the plan allows faculty to ask unique questions about student learning. The first level asks questions about the quality of learning within courses, focusing on the quality of performance objectives, classroom assessment practices and day-to-day instruction. The second asks questions about the quality of learning within programs and disciplines, whether the program is a degree, certificate or other educational program. The third asks questions about the quality of student learning in terms of general education goals.

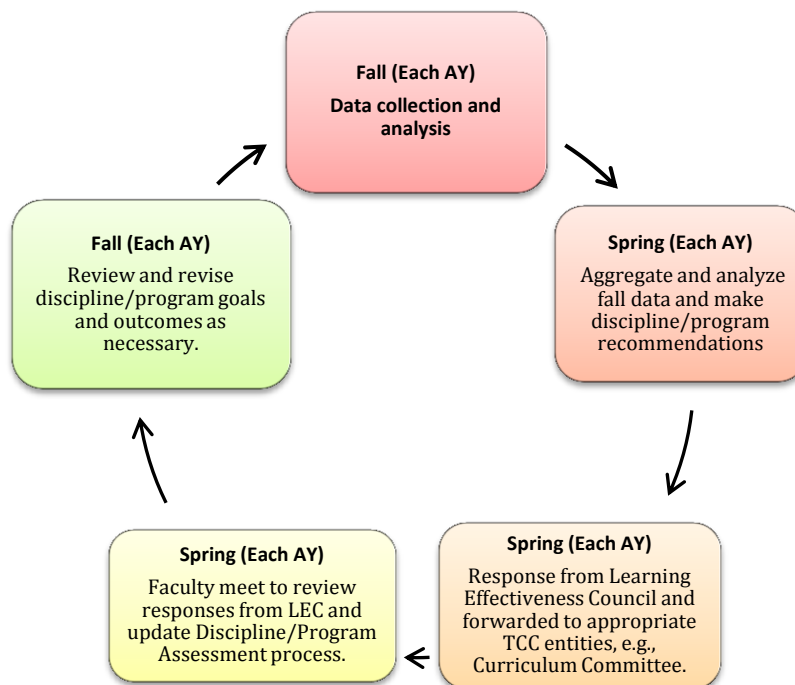
Faculty assess students regularly: they evaluate the extent to which students meet criteria that faculty, as experts in our fields, have determined students need to meet. When a significant number of students fail to meet these criteria, faculty try to figure out why and make changes if needed. The changes may be instructional, or they may require support from the college. This assessment plan is designed to make this process more transparent and data-driven. Rather than imposing specific assessment strategies on faculty, it provides a framework to encourage and support faculty initiatives toward improving the learning experiences of their students. Faculty members draft learning goals, develop assessment strategies, collect and review data, and make recommendations based on the data. In other words, the plan is faculty-driven, and the major purpose of the plan is transformative: to improve instruction and the curriculum.

The potential success of this plan depends not only on faculty participation but also on several committees that will act upon assessment data (see “Pathways for Change” chart below). The Academic Council receives recommendations that cross college division/campus lines. (A student advising recommendation would be an example.) The Academic Council also serves as a conduit for recommendations to amend the curriculum, which must go before the Board of Regents, or that involve budget expenditures, which require Division or Cabinet authorization. The newly formed Faculty Development Sub-Council (part of the Academic Council) will sponsor events related to effective teaching and learning and based on assessment results. The Curriculum Committee, which oversees the development of TCC’s program and course listings, will offer a pathway for curricular change if indicated by assessment data. The Learning Effectiveness Council will provide support to faculty as they develop and implement their specific assessment plans. To ensure that committees and other leadership take action on the assessment results, the Academic Council, Curriculum Committee, and Faculty Development Sub-Council will review all faculty committee recommendations.



The Learning Effectiveness Council has developed a timeline for implementing the plan in stages. The extended timeline allows faculty members enough time to develop goals, objectives and assessment strategies while completing regular teaching duties.

Annual Cycle of Student Learning Outcomes Assessment



Who Assesses Which Goals?

Under the previous assessment plan, all faculty were responsible for assessing all general education goals as well as their program/discipline goals. Under this new plan, faculty in workforce (AAS degrees) will focus on program goals while faculty in university transfer programs will focus on discipline goals. In both cases, assessment strategies should allow faculty to gather data about student learning within programs and disciplines, about how well the courses in the program/discipline work as a whole, and about how successful the program/discipline prepares students for the workplace or to continue their education.

All faculty teach skills and knowledge that support the general education goals. As stated in the catalog, "General education is at the core of the academic curriculum for all degree-seeking students." Most faculty also expect students to learn in ways specific to their discipline or program and can agree on the general kinds of learning that should take place in all courses offered within the discipline or program. A TCC student who takes several courses in psychology, for example, begins to develop general skills and a knowledge base common to psychology majors; students in the nursing program

develop general skills and a knowledge base that they will need to demonstrate in the workforce. The discipline and program goals reflect these commonalities among the different courses in the discipline or program. Faculty in each discipline will work together to assess how well students are meeting these goals.

Most disciplines and programs have already identified two to three goals. As part of their external accreditation, programs that lead to an AAS degree are required to identify and assess common program goals. These goals are informed by experts in the field of the knowledge, skills and attitude necessary for a successful career. In university transfer disciplines, faculty determine the learning goals that will help students succeed in upper-level courses. In some cases, university transfer disciplines have not yet identified a common set of goals other than the general education goals. Under this plan, faculty in each discipline will collaborate to determine common two to four discipline outcomes for consistent transfer purposes.

Whether assessing program or discipline goals, faculty need to assess students at various stages as they progress toward their academic and/or career goals. The assessment strategy, therefore, must include evidence gathered from various sources, not just from one single class.

Steps to Initiating the Program/Discipline Assessment

The Program/Discipline Assessment Strategy form (see Handbook) illustrates the process for assessing. The Learning Effectiveness Council is available to help faculty at any stage of the assessment process.

The first step of the process is to make sure the discipline or program goals are current and reflect the general learning that occurs in all courses within the discipline or program. To meet the HLC criteria, the goals must also be measurable. According to the HLC Site Visit Report, "The absence of measurable program and learning outcomes assessment is a barrier to making effective assessment of student learning possible."

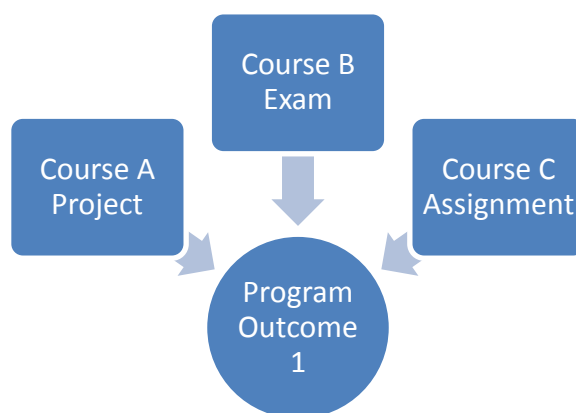
After creating or revising discipline/program goals, the steps to developing an assessment strategy are as follows:

1. Determine three student learning outcomes (SLO's) that the discipline will assess. Student Learning Outcomes are the specific skills, concepts, or activities that demonstrate students are meeting the discipline goals; they describe what a student is expected to learn as a result of participating in academic activities or experiences at the College. They focus on knowledge gained and skills and abilities acquired and demonstrated.
2. Consult with the Achieving the Dream (AtD) research team or the Office of Planning and Research to determine: a) if data already exist that can help measure your SLO's, and b) how you can develop a research strategy to measure the success of student learning related to the goals. Consulting with the AtD research team may help avoid duplication of research efforts and help faculty develop assessment strategies that will produce good data.
3. Determine an assessment activity or activities that will test how well students are learning the three SLO's. The assessment activities may be an assignment that students do in all sections of a course or they may be designed overtly for assessment purposes and then incorporated into the courses. The faculty members teaching the courses will

grade the activities, but faculty should assess the activities using common criteria. The results of all faculty members' assessments (e.g., how many students complete the activity successfully) will become data.

4. Provide a timeline within the assessment cycle that includes when the data will be collected and when data will be assessed and analyzed for conclusions.

Program/Discipline Outcomes Mapping



5. Collaborate with the Learning Effectiveness Council on the assessment strategy.

Steps to Making Recommendations for Change

A key step in any assessment process is to use the data to make improvements. Accrediting bodies call this step “closing the loop” (see Q&A Outcomes Assessment). When reviewing TCC’s new assessment strategy, the HLC will expect to see that the college uses assessment results to improve learning and inform change. To that end, the second stage in assessment is to make recommendations for change (see chart on page 3).

This stage occurs when enough data have been collected to draw conclusions about student learning. At that time, faculty complete the Assessment Recommendations Form (see Handbook) and meet with the University Transfer Dean, the Dean of Workforce Development, or the Learning Effectiveness Council. The steps to completing the form are as follows:

1. Summarize the results of the data collected and explain how they demonstrate student progress toward meeting the learning goals. Attach samples of data.
2. Make recommendations based on the data summaries. The recommendations may be curricular, instructional or “other.”
3. Inform the Learning Effectiveness Council of the results.
4. Recommendations will be forwarded to the Faculty Development Council, Curriculum Committee, or the Academic Council, depending on the recommendation.



Tulsa Community College

**Student Learning Outcomes Assessment
Handbook and Resources**

Prepared by:
Learning Effectiveness Council
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The How-To's of Assessment

This portion of the Outcomes Assessment Handbook is a “how-to” manual of sorts, taking you through the steps of creating an Outcomes Assessment Plan. Each section is designed to give you some basic guidelines for each aspect of an Outcomes Assessment Plan. Although the suggestions below represent best practices in Outcomes Assessment, as well as the experiences of faculty workgroups from previous years, we know that some disciplines have specific needs which may conflict with these recommendations, so use the Handbook as only a beginning point.

Faculty consensus

In the sections that follow, we provide tips and guidance to help you get the most out of your assessment effort. But no matter how you go about the process it ***is absolutely crucial that you take the time to work collaboratively to get consensus from all colleagues at each stage of the process.*** Remember, all faculty members teaching the course will be required to participate in the full-scale assessment, so getting them on board now will make the process easier later. If faculty can work together to create good outcomes now, assessment of the outcomes will be more meaningful.

Student Learning Outcomes

Students who know what is expected of them in terms of their learning have a framework for learning and are more successful. Faculty who have a clear idea of what they want their students to learn are able to align their instructional activities to these outcomes. While outcomes identify several of the most important things students will be learning, students can learn and professors can emphasize other skills, concepts, etc. Outcomes Assessment allows us to systematically examine the alignment between student learning, instructional or institutional expectations, and instructional activities. To this end, we begin planning for Outcomes Assessment with Student Learning Outcomes.

Where do we start?

Every course should have a set of college-wide common core expectations for student learning. These expectations are the most important things a student who passes the course should take away from any section of the course. While individual instructors may add to this course, there should be a shared understanding of the core skills and knowledge upon which the course is based. It is these expectations which should be reflected on each course syllabus and which should be used to determine Student Learning Outcomes for the Outcomes Assessment process.

Note: If the discipline does not have a set of articulated Student Learning Outcomes for the course, the development of college-wide common core Student Learning Outcomes may be one of the first outcomes of this process. The outcomes should become a standard part of the syllabus.

What makes a good learning outcome?

Generally speaking, good learning outcomes are:

- learner centered
- key to the course's mission
- meaningful for faculty and students
- representative of a range of thinking skills
- measurable

First, and most importantly, good learning outcomes focus on **what students can do** instead of the effort we put into teaching them. Second, college-wide outcomes must be **essential to the course's mission**, something that everyone teaching the course agrees is important. Avoid outcomes that are idiosyncratic or tied to a particular instructor's approach to a course. Third, design outcomes that are **meaningful for faculty and students**. If you

cannot explain *why* a certain outcome is important, it probably isn't very meaningful. Finally, outcomes often reflect a **range of thinking skills**, from low level identification to higher level application of knowledge or skills. Good outcomes **are measurable** in some way; they communicate what student learning will be evaluated in the course. Often courses will have two levels of outcomes: some broader based outcomes which reflect higher order thinking skills and broad topics, and some more narrow, lower level thinking skills outcomes which are essential to reaching the broader outcomes.

The Student Learning Outcomes should be included as a standard part of the course syllabus.

Student Learning Outcomes should:

- be written in terms of what the student will be able to do at the end of the course
- use active verbs
- reflect measurable standards or reflect the basic knowledge and skills that the student will be held accountable for
- reflect a combination of higher order thinking skills and supporting or enabling skills (see Bloom's Taxonomy in Appendix)

Discipline Example Student Learning Outcomes

ART Students will be able to distinguish form and content in 2-dimensional and 3-dimensional works of art.

BIOL Students will be able to explain the key elements in the theory of organic evolution, cite major evidence that supports Darwin's theory of natural selection, and explain the role of natural selection in the development of chemical resistance in microbes, viruses, plants and animals.

ENGL Students will be able to apply principles of logical argument and persuasion in their writing.

MATH Students will be able to demonstrate an understanding of the Central Limit Theorem and sampling distributions and use these to estimate a population parameter.

When defining Student Learning Outcomes to assess, it is tempting to take the easy route and think only in terms of learning outcomes that represent lower order skills because they will be simpler to evaluate. Instead, concentrate on the skills and knowledge which are essential for a student to be considered competent at the end of the semester. While some lower order types of learning outcomes may be essential to reaching higher level outcomes, make sure that you define a range of outcomes which reflect higher order, complex application tasks in addition to any essential supporting learning outcomes which may reflect lower order thinking skills.

Lower Order vs. Higher Order Thinking Skills

While basic recall of facts is important to any course, your assessment results will be more meaningful if you have chosen a more complex skill. Moreover, it will likely reflect what is truly important in your course. Often facts are important because we want students to be able to do something with that information.

Student Learning Outcomes (SLO), which reflect higher order thinking skills, use action verbs that are observable and measurable, as well as ones that reflect higher order skills. Examples of such verbs are solve, design, write, compare, apply, decide, draw, persuade, investigate, and evaluate.

Refer to the following possible outcomes for an information technology course:

- Students will be able to correctly summarize the key differences between open and closed source software development models.
- Students will be able to evaluate the strengths and weaknesses of open and closed source software development models.

While the first outcome is certainly easier to achieve, the second one better represents what students would have to do with the information in the real world. You will get more useful information about student learning with the second SLO.

How do we choose which Student Learning Outcomes to assess?

To select Student Learning Outcomes to assess for this process, consider the following questions:

1. What are the 3 or 4 most crucial outcomes for the course?
2. Are there topic areas where students struggle on a regular basis?
3. Do you have questions about a particular area of student achievement?
4. Are there outcomes which reflect skills or knowledge students will need in future courses or careers?
5. Are there outcomes which reflect General Education and discipline or program goals?

Identifying outcomes which reflect any of these characteristics would be a place to start.

Ultimately the outcomes you select:

- should reflect higher order thinking skills (**application of knowledge or skills**);
- be agreed upon as essential and core to the course (addressed in **every section** of the course); and
- **be meaningful** to the discipline.

How do we include a General Education competency in our Student Learning Outcomes?

One or two of your outcomes must reflect the assigned General Education goals and objective. Your first step will be taking the General Education goals and objective and choosing an outcome that is aligned to it, but is also more specific to how students are expected to use that skill in your course.

Many outcomes reflect one or more of the goals; you will select just one for each General Education competency you are scheduled to assess. The General education goals are extremely broad, expressing very general skills students are expected to have after taking General Education courses. The outcome you use will be specific to the course.

Each of the following ENG 1103 Student Learning Outcomes reflects the General Education Critical Thinking competency:

- Students will be able to critically evaluate a selected argument using the formal elements of argument.
- Students will be able to find and identify any flaws in logic and reasoning that weaken a given argument text.
- Students will be able to analyze and evaluate an author's use of rhetorical techniques and their effects on readers.

Note: Courses that are not part of the General Education Outcomes Assessment process, but are recognized as General Education, or naturally support any of the General education goals, are encouraged to assess Student Learning Outcomes that reflect General education goals as part of the Academic Area Outcomes Assessment.

Five Key Things to Remember About College-wide Common Core Student Learning Outcomes for a Course

1. Select outcomes to assess because they're meaningful, not because they're easy to measure.
2. Make sure your outcomes are expressed in terms of how students are impacted by your course.
3. Make sure that your common core outcomes reflect a faculty consensus in your discipline and not just the views of a few individuals.
4. Where possible, have your outcomes reflect higher order thinking skills.
5. Make sure that all faculty and students involved with the course are familiar with the outcomes.

Supporting Student Activities

To get the most meaningful results, students should be given opportunities to practice achieving an outcome before it is assessed. If faculty believe that a stated outcome is important, then logically they should have supporting activities in their course that help students achieve the outcome. For example, if the science faculty believes that writing effectively is an important skill in their courses, it should include writing assignments. As the American Association for Higher Education points out in number four of its "Nine Principles of Good Practice for

Assessing Student Learning,” Assessment requires attention to outcomes but also and equally to the experiences that lead to those outcomes. ... Assessment can help us understand which students learn best under what conditions; with such knowledge comes the capacity to improve the whole of their learning. These supporting activities allow students opportunities to practice the outcome and receive feedback on their performance. Supporting activities will likely vary from instructor to instructor, and that’s as it should be. What is essential is that every instructor is able to point to academic experiences that adequately prepare his or her students to successfully achieve the desired outcome.

How do we align Student Learning Outcomes and supporting student activities?

For this part of the Plan, you should identify class activities that help students achieve the Student Learning Outcome, according to faculty who teach the course. If this list is limited, you should have a discipline discussion to brainstorm ways in which the Student Learning Outcome could be supported instructionally.

The following are examples of activities that might be used to support an Information Literacy outcome:

- “Students will critically evaluate websites for possible use in an academic research paper.”
- Students take Tulsa Community College LRC’s tutorial “Evaluating Information on the World Wide Web” and submit their quiz results to the instructor.
- In a computer classroom the instructor demonstrates the process of finding websites for a given research topic, then has students work in pairs to find one credible site. After independent work time, instructor pulls up selected sites from the student pairs, asking them to justify their choices. Instructor provides feedback on the chosen sites. Instructor opens a discussion with the class about their previous experiences using the Internet for research, guiding the class to general principles about what makes a good site for academic research.

This is not an exhaustive list; it is merely a list of possible instructional activities faculty might realistically use as part of regular instruction to facilitate student achievement of the Student Learning Outcome.

Assessment Methods and Instruments

Choose an activity to assess and develop a common means of assessing the activity. The assessment method is the general type of tool you will use to assess the Student Learning Outcome. The instrument is the actual assignment, quiz, exam, or project you will use to complete the assessment. First, you should determine what method you want to use, and then, you will develop the actual tool.

How do we choose an assessment method and develop an assessment instrument?

Common assessment methods include test questions (multiple choice, short answer, essay), formal writing assignments (essays, research papers, reaction/review papers), performances, and portfolios. You will need to consider a variety of factors as you choose your method, including alignment with the outcome, ability to get faculty consensus, and ease of scoring. Sometimes, it is difficult to separate the method from the instrument; however, it is useful to step back at this point and consider the method separately from the actual assignment. Considering the general approach to the assessment will allow you to determine the most useful method and develop a useful assessment instrument. For example, a method for assessment could be a portfolio, and within the portfolio, there may be an instrument for measurement such as an assigned essay, the method and instrument are different.

Alignment

Probably the most important consideration when choosing or developing an assessment method is whether it is aligned with the Student Learning Outcome. In other words, is what you’re asking the students to do in your assessment going to provide you with solid evidence about whether or not they have achieved the desired outcome? If your outcome deals with a student’s ability to make a persuasive speech, a research paper is not a good instrument to measure this outcome. If you are assessing a quantitative reasoning outcome which speaks to

students' ability to interpret some particular statistical information, simply asking them to calculate something correctly will not tell you whether they've achieved that outcome.

Aligning outcomes with methods may seem like an obvious recommendation, but it's not uncommon to see a disconnect between the outcome and the assessment instrument when workgroups are in the early stages of writing their Outcomes Assessment Plans. In some instances, workgroups end up revising their outcomes after working on their assessment instrument. That's okay, as long as everything aligns before you pilot.

Ease of scoring

We all know that writing good multiple choice questions takes a lot of time, but scoring them is fast. Writing a good essay question is less time-consuming than grading a stack of student essays. With everything we do, we need to consider how much time it will take; you should consider the time involved in scoring the instrument and reporting the data. When choosing an assessment method you must weigh time against meaningful results. It may be challenging to find the balance, but the efforts of going through an Outcomes Assessment Plan won't be worth much if you cannot use the results to make decisions about the strengths and weaknesses of your course. The next main section will discuss scoring in greater depth.

Assess two (or more) Student Learning Outcomes with one method

One way to balance meaningful results with time spent scoring is to use one assessment instrument to measure more than one outcome. This technique has been used successfully by many of the workgroups participating in the General Education Outcomes Assessment process. This approach works especially well if you have both skill- and knowledge-based outcomes to assess. For example, the workgroup for an environmental biology course tasked with assessing the General Education Goal, "Effective Communication" and the following two course-specific outcomes:

- students will be able to critically analyze articles on environmental issues, and
- students will be able to describe major ecological principles and relate these principles to the evaluation of current environmental problems

You might choose as an **assessment instrument** a writing assignment that combines the first two outcomes. Perhaps they would design a paper assignment that asks students to analyze a given article about an environmental problem, applying major ecological principles to the problem. The paper would then be scored on three levels: how well the paper was written, how well the student analyzed the given article, and how well the student was able to relate ecological principles to the environmental problem addressed in the article. In many ways, this approach is more authentic to student learning because it asks students to integrate knowledge and skills.

Assessing each outcome alone certainly works, but combining them gives us a better picture of how students perform in a more "real world" setting. When scoring an assessment which assesses two or more outcomes, you will assign separate scores for each outcome as well as having an overall score.

Writing the Assessment Instrument

Once you've chosen your assessment method (exam, paper, etc.) it's time to create the actual instrument that will be handed out to students. We all have experience with writing assessment instruments; it's one of the major tasks we have as teachers. Creating an instrument for use in multiple sections does require an extra level of scrutiny. Again, you need to make absolutely certain that the assessment instrument you use measures how well the students meet the expected outcomes, rather than how well students are meeting an objective particular to your class. Additionally, make sure the instructions to the student clearly explain the expectations for the assignment.

Here are the four easiest ways to ensure a quality instrument for Outcomes Assessment:

- Make sure the assignment or exam questions are directly aligned with the outcomes.
- Write directions that are clear to people who have never seen the instrument before and that clearly articulate the expectations for completing the assignment.
- Pilot the instrument and ask for feedback from the students and faculty who used the instrument.
- Ask the Learning Effectiveness Council for help

Key Things to Remember about Developing an Assessment Method and Instrument

1. Consider the method separately from the actual instrument to find the best approach.
2. Think about the ease of scoring and alignment with the learning outcomes to help determine the best assessment approach.
3. Consider assessing two or more outcomes with one assessment method/instrument.
4. Make sure the instructions for the assessment instrument clearly lay out the expectations for the student and faculty who will use the assessment instrument.

Scoring Tools

“Consistency, consistency, consistency” is the mantra when multiple individuals are being asked to score a common assessment, as is the case in the College’s Student Learning Outcomes Assessment process. If the assessment instrument consists of a set of objective questions each with only one right or wrong response, e.g., multiple choice, then a simple answer key distributed to all faculty who will be administering the exam will do the trick. If, on the other hand, the instrument involves open-ended types of questions or assignments, such as essays, research papers or student performances, which by nature require some subjectivity in their scoring, there are some things you can do to structure a scoring scheme that will maximize consistency among faculty administering the assessment.

How do we score the assessment?

Identify the dimensions of the outcome

The first step in setting up scoring procedures for non-objective assessments is to identify the dimensions for each outcome; i.e., the key broad aspects or areas of student performance on which the assessment will be scored. Here are two examples from previous cycles of the General Education Goals Assessment process that show how outcomes’ dimensions can be defined. In the following example, the General Education goal is effective communication and the dimensions used by the workgroups follow.

Communicating effectively

- Mechanics
- Development
- Style

Short answer assessments

In the case of assessments made up of open-ended short answer questions, it is critical that a clear answer key of acceptable right answers for each question be developed. During the full implementation of the assessment, all instructors must then score their students based on this common answer key, though they are free to grade additional answers as correct in determining their own course grades.

Longer, open-ended assessment instruments

For scoring consistency with longer open-ended assignments such as essays, research papers, or performances, a rubric should be developed. A rubric is a criterion based scoring tool that specifies levels of achievement (e.g. exemplary, satisfactory, unsatisfactory) for each dimension of the outcome. As part of the rubric, criteria are

provided that describe what constitutes the different levels of achievement. For example, the rubric that is being used to score effective writing with dimensions of mechanics, style, and development would provide the criteria that describe what constitutes exemplary, satisfactory, and unsatisfactory student work in the areas of for writing mechanics, for writing style, and for writing development. Although only three levels of achievement are specified in the above example, rubrics can have any number of levels that is manageable and makes sense for the given assessment instrument. However, from three and five levels generally make the most sense. There are many websites that provide rubrics. The following website at Winona State University offers a varied selection of rubrics: <http://www.winona.edu/AIR/rubrics.htm>.

More about rubrics

There are two major types of rubrics: holistic and dimensional. Dimensional is also known as a primary trait rubric. Both detail the particular qualities that separate excellent from poor student work along a spectrum, but the first groups the dimensions together, while the second keeps them separate.

The holistic rubric looks at the instrument as a whole; students receive one overall score based on a pre-determined scheme used by everyone. The dimensional rubric yields sub-scores for each dimension, as well as a cumulative score which is the sum, either weighted or un-weighted, of the dimensional scores.

Each type of rubric has its strengths and weaknesses. Holistic rubrics allow you to look at a student's overall performance and often correspond better to the grade that pops into our heads immediately after you finish looking at the student work. The dimensional rubric provides more information about what's working and what's not. For example, perhaps students are doing a good job with learning the mechanics of writing, but not so well with learning writing development. A dimensional rubric will provide information with this level of detail, whereas a holistic rubric will not. Regardless of the type of rubric, it is important that it be shared with students well before the assessment is administered. It is unreasonable to expect students to perform well on an assessment if they don't have a clear understanding of the standards being used to evaluate it.

Assessments based on objective questions

Even if you are using a set of objective questions you may find it helpful to group subsets of these questions together that reflect an assessment of a specific dimension of your outcome. Doing so might be particularly useful in situations where the assessment includes a large number of objective questions. Without grouping the questions to reflect key dimensions of the outcome being assessed, faculty participating in the assessment will have to enter a score for each question in the assessment on a scoring spreadsheet, potentially creating a significant data entry burden. By grouping, say, five questions within a dimension, faculty could enter one number for the dimension, i.e., the number correct out of the 5 questions, instead of entering a separate student score for each of the five questions. There is, of course, a tradeoff in doing this: the discipline will get back less information from the data analysis, so this is a consideration that needs to be carefully thought out.

5 Key Things to Remember about Scoring Tools

1. It is imperative that the discipline talk about the assessment instrument and determine what kind of student performance qualifies as successful.
2. When using objective measures (e.g. multiple choice tests), consider grouping questions which reflect a specific aspect of the outcome.
3. When using rubrics, be sure that students see the rubric which will be used to evaluate the assignment before they complete it.
4. When using rubrics, norming is really important.
5. Be sure to get feedback after the pilot on how well the scoring tool worked with the assignment and whether faculty feel that it reflects successful performance effectively.

Assessment Glossary

Action Plans: Specific changes that a given instructor or program plans to implement based on assessment results. (MUAP)

Assessment: The systematic collection, examination, and interpretation of qualitative and quantitative data about student learning and the use of that information to document and to improve student learning. (HLC/NCA)
Assessment is an ongoing process aimed at understanding and improving student learning. It involves making our expectations explicit and public; setting appropriate criteria and standards for learning quality; 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 performance. (Angelo, 1995)

Assessment Process:

- Measurement: The systematic collection of data on student achievement.
- Assessment: The analysis of data to determine results
- Evaluation: Using results to make recommendations for change.

Benchmark: A detailed description of a specific level of student performance expected of students at particular ages, grades, or development levels. Benchmarks are often represented by samples of student work. A set of benchmarks can be used as "checkpoints" to monitor progress toward meeting performance goals. (CRESST)

Course Level of Assessment: Vantage point of the assessment plan that inquires into the quality of learning within a course.

Course Performance Objectives: Specific behaviors that demonstrate students have met course requirements.

Criteria: Guidelines, rules, characteristics, or dimensions that are used to judge the quality of student performance. Criteria indicate what we value in student responses, products or performances. They may be holistic, analytic, general, or specific. Scoring rubrics are based on criteria and define what the criteria mean and how they are used. (CRESST); Performance criteria help assessors maintain objectivity and provide students with important information about expectations, giving them a target or goal to strive for. (New Horizons for Learning)

Criterion-referenced assessment: An assessment where an individual's performance is compared to a specific learning objective or performance standard and not to the performance of other students. Criterion-referenced assessment tells us how well students are performing on specific goals or standards rather than just telling how their performance compares to a norm group of students nationally or locally. In criterion-referenced assessments, it is possible that none, or all, of the examinees will reach a particular goal or performance standard. (CRESST)

Developmental Education: Curricular programs designed to prepare students for college-level work in reading, writing and math.

Direct Measures of Learning: Evidence about student learning based on student performance that demonstrates the learning itself. Can be value added, related to standards, qualitative or quantitative, embedded or not, using local or external criteria. Examples are written assignments, classroom assignments, presentations, test results, projects, logs portfolios, and direct observations. (Leskes, 2002)

Discipline: A branch of knowledge, especially one studied in higher education.

Evaluation: The setting, or appraisal, of a value. Evaluation has to do with the rendering of a value judgment. Measurement merely positions something along a continuum, whereas evaluation posits a judgment based on a given position. (MUAP)

Formative Assessment: The gathering of information about student learning during the progression of a course or program to improve the learning of those students. Example: reading the first lab reports of a class to assess whether some or all student in the group need a lesson on how to make them succinct and informative. (Leskes, 2002) – contrast with summative assessment.

Gateway Courses: Those courses that address the General Education Goals

- Critical Thinking: Mathematics--College Algebra??
- Effective Communication: Composition II, Speech??
- Engaged Learning: Social science course(s)
- Technological Proficiency: Exam/CSCI 1203 Computer Concepts and Applications/Equivalent or advanced computer course

General Education Assessment: Assessment that measures the institution-wide, general education goals agreed upon by the faculty. General education assessment is more holistic in nature than program outcomes assessment because general education goals are measured across disciplines, rather than just within a single discipline. (MUAP) – TCC's general education goals include critical thinking, effective communication, engaged learning and technological proficiency.

General Education Goals: Four expectations required of all TCC students, which are tied to the College's mission and goals. They include Critical Thinking, Effective Communication, Engaged Learning, and Technological Proficiency.

General Education Level of Assessment: Vantage point of the assessment plan that inquires into the learning expectations of all TCC students.

Indirect Measures of Learning: Evidence about how students feel about learning and their learning environment rather than actual demonstrations of outcome achievement. Examples include surveys, questionnaires, interviews, focus groups, and reflective essays. (Eder, 2004)

Institutional Effectiveness: Planning and Institutional Research Office/Department?? process to review program viability.

Learning Effectiveness Council: Faculty-controlled process to investigate the quality of student learning at TCC

Norm-referenced assessment: An assessment where student performance is compared to a larger group. Usually the larger group or "norm group" is a national sample representing a wide and diverse cross-section of students. Students, schools, districts, and even states are compared or rank-ordered in relation to the norm group. The purpose of a norm-referenced assessment is usually to sort students and not to measure achievement towards some criterion of performance. Most standardized achievement tests are referred to as norm-referenced. (CRESST)

Outcomes: Operational statements describing specific student behaviors that evidence the acquisition of desired knowledge, skills, abilities, capacities, attitudes or dispositions. Learning outcomes can be usefully thought of as behavioral criteria for determining whether students are achieving the educational objectives of a program, and, ultimately, whether overall program goals are being successfully met. (Allen, Noel, Rienzi & McMillin, 2002)

Portfolio Assessment: A portfolio becomes a portfolio assessment when (1) the assessment purpose is defined; (2) criteria or methods are made clear for determining what is put into the portfolio, by whom, and when; and (3) criteria for assessing either the collection or individual pieces of work are identified and used to make judgments about performance. (CRESST)

Program: A program leads to a certificate or degree.

Program Goals: Student learning expectations for curricular programs.

Program Level of Assessment: Vantage point of assessment plan that inquires into the quality of learning within programs as well as application of the appropriate general education goals.

Program Objectives: Specific behaviors that demonstrate students have met program goals.

Qualitative measurement: Collecting information that is not numeric in nature. Qualitative data typically consist of words while quantitative data consist of numbers. These words are often assigned to categories, which can then be manipulated to help achieve greater insight into the meaning of the data and to help examine specific hypotheses. Some sources of qualitative data may include written documents [e.g., student assignments], interviews [e.g., focus groups], case studies [e.g., portfolios] and open-ended survey questions and/or questionnaires. (Trochim, 2000); The only numerical operation that can be conducted on qualitative variables is calculation of the frequency or percentage in each category. (Bailey, 1994) – In student learning assessment, qualitative data are often represented by a quantitative value by comparing the data to a scoring rubric in which the value is assigned based on a standard set of performance criteria.

Quantitative measurement: Collecting information that is numeric in nature. Quantitative data is that in which the values of a variable differ in amount [in numeric terms] rather than in kind [in descriptive terms]. (Bordens, 1997); This data can be analyzed using quantitative methods and generalized to a larger population. (Leskes, 2002)

Rubric: Specific sets of criteria that clearly define 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. (System for Adult Based Education Support)

Student Learning Institute: Annual forum in which Faculty present on assessment or share assessment successes.

Summative assessment: The gathering of information at the conclusion of a course, program or undergraduate career 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 well than others. (Leskes, 2002) – contrast with formative assessment.

Value-added: The increase in learning that occurs during a course, program, or undergraduate education. Can either focus on the individual student (how much better a student can write, for example, at the end than at the beginning) or on a cohort of students (whether senior papers demonstrate more sophisticated writing skills – in the aggregate – than freshman papers). Requires a baseline measurement for comparison. (Leskes, 2002)

AAHE's 9 Principles of Good Practice for Assessing Student Learning

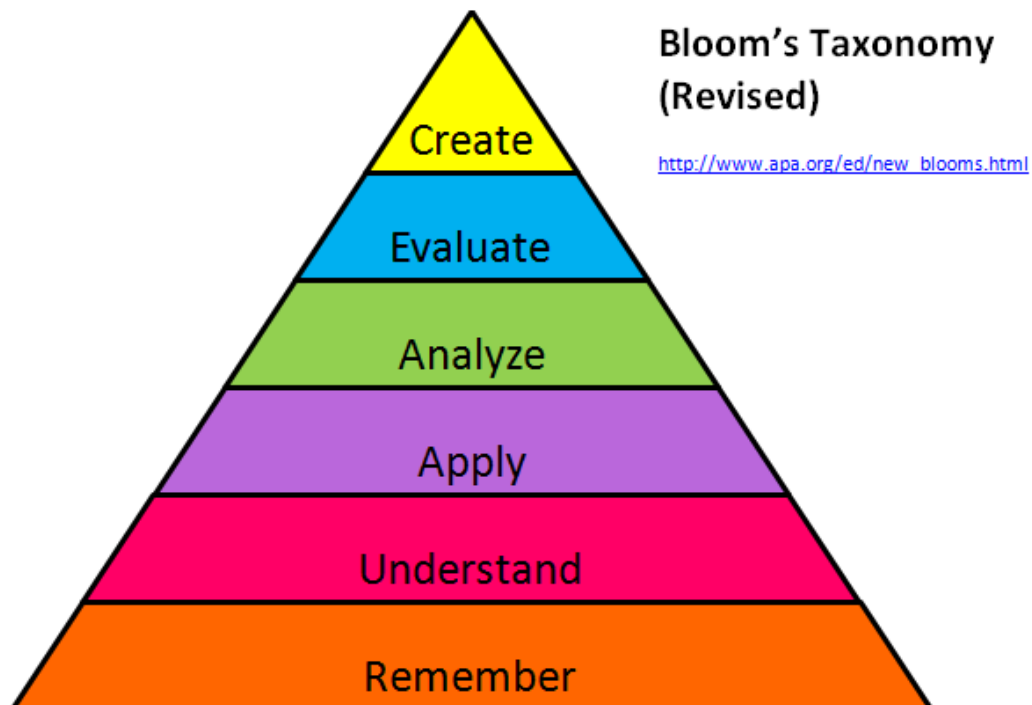
- 1. The assessment of student learning begins with educational values.** Assessment is not an end in itself but a vehicle for educational improvement. Its effective practice, then, begins with and enacts a vision of the kinds of learning we most value for students and strive to help them achieve. Educational values should drive not only *what* we choose to assess but also *how* we do so. Where questions about educational mission and values are skipped over, assessment threatens to be an exercise in measuring what's easy, rather than a process of improving what we really care about.
- 2. Assessment is most effective when it reflects an understanding of learning as multidimensional, integrated, and revealed in performance over time.** Learning is a complex process. It entails not only what students know but what they can do with what they know; it involves not only knowledge and abilities but values, attitudes, and habits of mind that affect both academic success and performance beyond the classroom. Assessment should reflect these understandings by employing a diverse array of methods, including those that call for actual performance, using them over time so as to reveal change, growth, and increasing degrees of integration. Such an approach aims for a more complete and accurate picture of learning, and therefore firmer bases for improving our students' educational experience.
- 3. Assessment works best when the programs it seeks to improve have clear, explicitly stated purposes.** Assessment is a goal-oriented process. It entails comparing educational performance with educational purposes and expectations -- those derived from the institution's mission, from faculty intentions in program and course design, and from knowledge of students' own goals. Where program purposes lack specificity or agreement, assessment as a process pushes a campus toward clarity about where to aim and what standards to apply; assessment also prompts attention to where and how program goals will be taught and learned. Clear, shared, implementable goals are the cornerstone for assessment that is focused and useful.
- 4. Assessment requires attention to outcomes but also and equally to the experiences that lead to those outcomes.** Information about outcomes is of high importance; where students "end up" matters greatly. But to improve outcomes, we need to know about student experience along the way -about the curricula, teaching, and kind of student effort that lead to particular outcomes. Assessment can help us understand which students learn best under what conditions; with such knowledge comes the capacity to improve the whole of their learning.
- 5. Assessment works best when it is ongoing not episodic.** Assessment is a process whose power is cumulative. Though isolated, "one-shot" assessment can be better than none, improvement is best fostered when assessment entails a linked series of activities undertaken over time. This may mean tracking the process of individual students, or of cohorts of students; it may mean collecting the same examples of student performance or using the same instrument semester after semester. The point is to monitor progress toward intended goals in a spirit of continuous improvement. Along the way, the assessment process itself should be evaluated and refined in light of emerging insights.
- 6. Assessment fosters wider improvement when representatives from across the educational community are involved.** Student learning is a campus-wide responsibility, and assessment is a way of enacting that responsibility. Thus, while assessment efforts may start small, the aim over time is to involve people from across the educational community. Faculty play an especially important role, but assessment's questions can't be fully addressed without participation by student-affairs educators, librarians, administrators, and students. Assessment may also involve individuals from beyond the campus (alumni/ae, trustees, employers) whose experience can enrich the sense of appropriate aims and standards for learning. Thus

understood, assessment is not a task for small groups of experts but a collaborative activity; its aim is wider, better-informed attention to student learning by all parties with a stake in its improvement.

7. **Assessment makes a difference when it begins with issues of use and illuminates questions that people really care about.** Assessment recognizes the value of information in the process of improvement. But to be useful, information must be connected to issues or questions that people really care about. This implies assessment approaches that produce evidence that relevant parties will find credible, suggestive, and applicable to decisions that need to be made. It means thinking in advance about how the information will be used, and by whom. The point of assessment is not to gather data and return "results"; it is a process that starts with the questions of decision-makers, that involves them in the gathering and interpreting of data, and that informs and helps guide continuous improvement.
8. **Assessment is most likely to lead to improvement when it is part of a larger set of conditions that promote change.** Assessment alone changes little. Its greatest contribution comes on campuses where the quality of teaching and learning is visibly valued and worked at. On such campuses, the push to improve educational performance is a visible and primary goal of leadership; improving the quality of undergraduate education is central to the institution's planning, budgeting, and personnel decisions. On such campuses, information about learning outcomes is seen as an integral part of decision making, and avidly sought.
9. **Through assessment, educators meet responsibilities to students and to the public. There is a compelling public stake in education.** As educators, we have a responsibility to the publics that support or depend on us to provide information about the ways in which our students meet goals and expectations. But that responsibility goes beyond the reporting of such information; our deeper obligation -- to ourselves, our students, and society -- is to improve. Those to whom educators are accountable have a corresponding obligation to support such attempts at improvement.

Assessment of Student Learning: Introduction to Bloom's Taxonomy

Historically, discussions about student learning have been guided by a taxonomy of learning that has come to be known as **Bloom's taxonomy** (Bloom & Krathwohl, 1956). This taxonomy is a hierarchical structure representing six levels of thinking and learning skills that range from basic learning objectives such as remembering through higher-order learning such as analysis, evaluation, and creativity. Bloom's taxonomy formed the basis for early work on the development of instructional objectives for classes and curricula.



Based in an APA adaptation of Anderson, L.W. & Krathwohl, D.R. (Eds.) (2001)

More recently, emphasis has shifted from **instructional objectives**, which describe what instructors do and the content of material presented during classroom instruction, to **student learning outcomes**, which describe what students can do as a result of their educational experiences. This change in emphasis is associated with changes in the language used and changes in expectations about instructional style. Instructional objectives were typically described as things (knowledge, understanding, content, facts) that could be delivered during a lecture or presented in written text. In contrast, student learning outcomes are described using concrete verbs (behaviors that can be observed in the student) rather than nouns. Along with this change in language is a change in emphasis on classroom instructional activity. Although passive activities such as lecturing can be efficient methods for transmitting basic facts and knowledge, active learning strategies that engage students in learning are expected to encourage the development of higher-order thinking skills.

Comparison of Bloom's Taxonomy for Learning Objectives and Student Learning Outcomes	
Learning Objective Nouns	Learning Outcome Active Verbs
Knowledge	Memorize Recite Name Identify
Understanding	Describe Explain Classify Discuss
Application	Apply Choose Employ Operate Practice
Analysis	Compare Contrast Calculate Test Analyze
Synthesis	Construct Compose Create Design Propose
Evaluation	Argue Assess Defend Judge Evaluate

Note: A useful collection of action words for Bloom's taxonomy can be found at <http://uwf.edu/cutla/SLO/ActionWords.pdf>. The careful reader will note that the same action words appear at multiple levels in the Bloom taxonomy. The sophistication of learning represented by a given action word can depend on the context of the task as well as the action word used. For example, although the student learning outcomes *Compute the average of ten values* uses the same action word as *Compute the expected utility for a decision*, the context of the tasks clearly represent differing levels of expertise.

In a well-designed curriculum, students will develop basic learning skills and acquire foundation knowledge in their earliest courses. As they move to more advanced courses, they develop higher-order learning skills and

more advanced understanding of the discipline. This developmental change can be described in terms of the increasingly sophisticated behaviors represented at higher levels in Bloom's taxonomy.

An important consequence created when Bloom's taxonomy based on nouns is revised to describe student learning outcomes in terms of concrete actions is that these new descriptions can be used to create direct measures for curriculum assessment. The nouns used in the original taxonomy were frequently abstract concepts such as *understanding* that were not directly measurable. Similarly, passive verbs such as *be exposed to* are not helpful when developing direct measures. However, concrete action words such as *remember* and *design* can be used to operationally define direct measures that might be useful in an assessment plan.

Oral Communication Skills Rubric Example

Student _____ Course _____ Date _____

Intended Outcome: the student will use clear and concise communication in the oral form.

Performance Area	Rating = 4	Rating = 3	Rating = 2	Rating = 1	Score
Organization	Presenter follows logical sequence and provides explanations/elaboration.	Presenter follows logical sequence, but fails to elaborate.	Presenter does not follow logical sequence (jumps around in presentation).	There is no logical sequence of information.	
Eye Contact	Presenter seldom returns to notes, maintaining eye contact with audience throughout the presentation.	Presenter maintains eye contact with audience most of the time, but frequently returns to notes.	Presenter reads most of report, but occasionally makes eye contact with audience.	Presenter reads entire report, making no eye contact with audience.	
Delivery	Presenter speaks clearly and loud enough for all in audience to hear, makes no grammatical errors, and pronounces all terms correctly and precisely.	Presenter speaks clearly and loud enough to be heard by most in audience, makes relatively few grammatical errors, and pronounces most terms correctly.	Presenter's voice is relatively clear, but too low to be heard by those in the back of the room. Presenter makes several major grammatical errors, and mispronounces some terms.	Presenter mumbles, mispronounces terms, and makes serious and persistent grammatical errors throughout presentation. Presenter speaks too quietly to be heard by many in audience.	
Total					
Overall Score = Total/3					

Faculty Discipline/Program Timeframe**September 2010****STEP 1**

Review and revise discipline/program goals as necessary; if outcomes are already established, review these.”

STEP 2

Select one or more discipline/program goals to direct assessment of student learning.

STEP 3

Describe or define what knowledge, skills, and attitudes students need to demonstrate progress toward the discipline/program goal(s) selected in Step 2.

STEP 4

Choose the knowledge, skills, and attitudes (one or more) identified in Step 3 to be measured.

STEP 5

Choose the course(s) that represent the knowledge, skills, and attitudes identified in Step 4.
October-December 2010

STEP 6

Develop and/or identify one or more common activities that will demonstrate the knowledge, skills, and attitudes in Step 4. In addition, discuss how this outcome also demonstrates one of TCC's general education goals.

STEP 7

Determine common criteria and scoring that will measure student learning, (i.e., knowledge, skills, and attitudes) identified in the common activity identified in Step 6.

STEP 8

Determine the level of proficiency based on SKA criteria.

STEP 9

Determine the % of students expected to demonstrate the established level of proficiency.

STEP 10

Determine a process for accurate, consistent, and secure data collection and analysis that is sustainable and replicable.

February-March 2011**STEP 11**

ADs submit Form A, Discipline/Program Outline, to UT and WD Deans.

STEP 12

Schedule sessions, if necessary, to pilot scoring process to ensure consistency and validity.

STEP 13

Schedule LEC help sessions, if necessary.

April-May 2011**STEP 14**

Implement assessment process, as defined by the discipline/program in Step 10

Assessment Cycle One Ends**Fall 2011****STEP 15**

Faculty meet to review spring data results at Convocation.

STEP 16

Repeat spring data collection and analysis cycle: Steps 14 and 15

January 2012**Assessment Cycle Two Begins****STEP 17**

Aggregate and analyze spring and fall 2011 data and make discipline/program recommendations. ADs submit Forms B and C to UT and WD Deans
February 1, 2012

STEP 18

Response from Learning Effectiveness Council to ADs for implementing recommendations through appropriate TCC entities, e.g., Faculty Development Committee, Curriculum Committee, Academic Council.
March-April 2012

STEP 19

Faculty meet to review responses from LEC and update Discipline/Program Assessment process.

STEP 20

Learning Effectiveness Council submits executive summary to Cabinet and Board of Regents and reports to OSRHE and HLC Assessment Academy.

**Assessment Forms Due Dates
Academic Year 2010-2011**

Form	Recipient(s)	<u>Form Due Dates</u>	Actions
Form A Discipline/ Program Outline	UT and WD Deans and LEC	August- December 2010	Fall 2010 UT/WD Deans and ADs Convene Discipline Meeting ADs and faculty review D/P goals and outcomes
Form B Discipline/ Program Assessment Summary	UT and WD Deans and LEC	End of spring and fall semesters	Spring 2011 Data gathering and analysis
Form C Discipline/ Program Recommendation(s)	UT and WD Deans and LEC	End of spring and fall semesters	Fall 2011 ADs and faculty examine Spring 2011 data results and conduct fall data gathering
Form D Course Outlines	UT and WD Deans and LEC	On-going	Fall 2011 UT and WD Deans with ADs work with faculty to continue developing course outlines

**Assessment Forms Due Dates
Academic Year 2011-2012**

Form	Recipient(s)	Form Due Dates	Actions
Form A Discipline/Program Outline	UT and WD Deans and LEC	August- December 2011	Fall 2011 ADs and faculty examine Spring 2011 data results and conduct fall data gathering
Form B Discipline/Program Assessment Summary	UT and WD Deans and LEC	February 1, 2012	Spring 2012 Based on data gathering and analysis from Spring 2011 and Fall 2011
Form C Discipline/Program Recommendation(s)	UT and WD Deans and LEC	February 1, 2012	Spring 2012 <ul style="list-style-type: none"> • Based on data gathering and analysis from Spring 2011 and Fall 2011 • UT and WD Deans in conjunction with IR will develop executive summary of results for the Learning Effectiveness Council • Learning Effectiveness Council will report to Board of Trustees • D/P prepare for any budgetary needs as a result of recommendations
Form D Course Outlines	UT and WD Deans and LEC	On-going	Spring 2012 Continue developing course outlines

FORMS AND EXAMPLES

Form A
Program/Discipline Status

Assessment Cycle: 2010-2011

Program/Discipline Name:

Program/Discipline Goal:

Program/Discipline Outcomes (measurable/observable):

#1.

#2.

#3.

Program/Discipline outcome measurement tool: (portfolio, assignment, test question, service learning experience, etc.)

#1.

#2.

#3.

Explain which of the following general education goals this outcome supports:

1. Critical Thinking--insert appropriate # above or other outcome
2. Effective Communication-- insert appropriate # above or other outcome
3. Engaged Learning--insert appropriate # above or other outcome
4. Technological Proficiency--insert appropriate # above or other outcome

For information about currently available data, contact the AtD Data Team or the Office of Planning and Research

Form A

Program/Discipline Status

Assessment Cycle: 2010-2011

Program/Discipline Name: Physical Therapist Assistant Program

Program Goal:

Program/Discipline Outcomes (measurable/observable):

- #1. Ninety percent of the students completing the program will pass the computerized national licensure examination .
- #2. Ninety-five percent of Tulsa area employers will rate TCC PTA graduates as safe and ethically sound with a score of 4/5 or higher on the Employer Survey.
- #3. Ninety percent of physical therapist assistant students will be scored by area clinical instructors at entry level on the clinical performance instrument by the conclusion of Clinical Practice III.

Program/Discipline outcome measurement tool (portfolio, assignment, test question, service learning experience, etc.):

- #1. National Licensure Examination sponsored by the Federation of State Boards of Physical Therapy
- #2. Employer Survey (Questions #1-6, 8 & 9) which is sent to employers of graduates every other year.
- #3. APTA Clinical Performance Instrument which is completed by area clinical instructors at the conclusion of each clinical education experience.

Program/Discipline Outcome(s) that address TCC General Education Goals:

1. Critical Thinking—Outcome #1
2. Effective Communication—Outcome #2
3. Engaged Learning—Outcome #3
4. Technological Proficiency—Outcome #1

For information about current available data, contact the AtD Data Team or the Office of Planning and Institutional Research

Form B**Program/Discipline Assessment Summary**

Assessment Cycle:

Program/Discipline:

Associate Dean:

Program Goal	Common Criteria and Scoring Method	Classes Selected to Assess	Number of Students Assessed	Common Assessment Activity	Data Gathering Process	Results

Form B

Program Assessment Summary Example

Assessment Cycle: 2011-2012

Program: Marketing

Associate Dean:

Examples are given below for program assessment in the Marketing Program:

Program Goal	Common Criteria and Scoring Method	Classes Selected to Assess	Number of Students Assessed	Common Assessment Activity	Data Gathering Process	Results
Students will demonstrate mastery of web design and marketing principles on the Internet	Faculty-developed Criterion-referenced rubric with mastery level at 80%	MKTG 1433: Marketing Internship III	25	Portfolio of self-selected, best work addressing each criterion	Upon entry into the program, students will be given the program outcomes criteria which align assignments in courses required in the program that could meet the criteria. Students may select their best work which demonstrates their mastery of the criterion.	Students scoring at mastery level: Criterion One—98%; Criterion Two—78% Criterion Three—85%
Students will demonstrate mastery of negotiation skills	Presentation skills with 80% mastery level	MKTG 1313: Sales and Negotiations	20	Verbal case study	MKTG 1313-Sales and Negotiations develops sales presentations and closing strategies with special emphasis on developing negotiation skills.	Students scoring at mastery level: Criterion One—75% Criterion Two—88%

Form C
Outcomes Recommendation Form

Assessment Cycle: 2011-2012

Program:

Associate Dean:

Results/Recommendations:

Provided to:

- Curriculum Committee *for curricular change(s)*
- Academic Council *for inter-divisional change(s)*
- Faculty Development Sub-Council *for instructional change(s)*
- Other
- No action required

Form C
Outcomes Recommendation Form

Assessment Cycle: 2011-2012

Program: Physical Therapist Assistant Program

Associate Dean: Jim Pickens

Results/Recommendations:

Criterion: Physical therapist assistant students will rate TCC student services at or above 4/5 on the graduate survey, questions #15 & 16.

Results: #15 M=4.04
#16 M=3.78

Action Taken: Had the current group of students participate in a Focus group to tease out which of the students services were problematic. The two areas that created the most dissatisfaction was the cafeteria and financial aid. The Dean of Student Services was given the results of the Focus Group to use for quality improvement.

Criterion: Ninety percent of students will pass the computerized national licensure examination.

Results:	Class of 2008	88%
	Class of 2009	89%

Actions Taken: We examined the academic profiles of the students who have struggled with the examination over the last several years. The most common issue was that these students had routinely made C's throughout the program in the non-clinical courses. Even those who had to repeat a course, tended to make a C the second time around. The old policy only required a 2.0 GPA in all PTA classes and only a minimum grade of C on courses being repeated. As a result, two changes will be recommended:

1. If a course is repeated, the student must earn a B the second time
2. Students must maintain a GPA of 2.75 on all PTA classes every semester.

Provided to:

Curriculum Committee *for curricular change(s)*

Academic Council *for inter-divisional change(s)*

Faculty Development Sub-Council *for instructional change(s)*

Other

No action required

FORM D**Course Outline**

Course Name and Number:

Department/Division:

Semester(s) Offered:

Contact/Credit Hours:

Delivery Method(s):

Course Description:

CEP Description:

Link to OSRHE Course Equivalency Project course descriptions: <http://www.okhighered.org/transfer-students/2010-11/cep-appendix10-11.pdf>

Common course outcomes (measurable/observable):

Outcome(s) within course that addresses:

Critical Thinking--

Effective Communication--

Engaged Learning--

Technological Proficiency--

Assessment methods:

FORM D

Course Outline Example

Course Name and Number: *Speech 1113*

Department/Division: *Communications*

Semester(s) Offered: *All*

Contact/Credit Hours: *3 credit hours*

Delivery Method(s): *classroom, blended, and on line*

Course Description: *An introductory course in oral communications; emphasis is on improving applied communication skills. Special attention is given to critical thinking skills and the anatomy of the communication process: audience analysis, research, organization, logic, ethical use of evidence, delivery, and listening. Required for B.A. and B.S. degrees in most professional majors; i.e., Business, Law, Education, Medicine, English. Lecture 3 hours, no laboratory.*

CEP Description: *SP 020 Introduction to Communication (Performance). Principles and techniques of preparing for, participating in, and evaluating communication behavior at the interpersonal and public levels.*

Common course outcomes (measurable/observable):

1. *Students will effectively demonstrate skills in organizing and preparing extemporaneous oral presentations.*
2. *Students will demonstrate appropriate skills in delivering extemporaneous oral presentations.*
3. *Students will demonstrate critical thinking skills by applying knowledge and understanding in the development of oral assignments for different contexts, situations and/or specific endeavors.*

Outcome(s) within course that address:

- *Critical Thinking—(See #3 above)*
- *Effective Communication—(See #s 1 -3 above)*
- *Engaged Learning—(See #2 above)*
- *Technological Proficiency—not required by all instructors*

List of Learning Assessment Methods Used:

- *Oral presentations*
- *Powerpoint presentations*
- *Written assignments*
- *Exams*
- *Small-stakes written exams*
- *Graded group activities*
- *Peer critiques*
- *Video performance feedback*
- *Self-assessment*

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