

## Student Learning Outcomes (SLO)

Assessment includes many aspects, such as teaching, learning, retention, grading, selecting the best resources, and other important elements. However, standards of accountability hold us most responsible for student learning. Assessment activities must focus on **student learning outcomes**. Use assessment to focus on what matters most (See <http://www.tcc.edu/welcome/collegeadmin/OIE/SOA/principles.htm> for general principles of assessment). Assessment is the systematic collection and analysis of information to improve student learn and program viability. **Assessment** is "... the process of gathering evidence to make inferences about...how students are progressing toward specific goals" (National Standards, Pennington, 2001). A **learning objective** is a written statement of the measurable achievement a participant will be able to demonstrate as a result of participation in a learning activity. The outcome is singular not "bundled."

Purpose of Learning Objectives		
To Communicate to Ourselves	To Communicate to Participants	To Communicate to Other Interested
With greater clarity the intent of our activities so that we can devise effective strategies for participants to learn what we intend for them to learn	What we intend for them to learn as a result of participation so they can organize their efforts toward accomplishing the desired behavior(s).	Required information for Administration, Accrediting Bodies (SACS), SCHEV, IPEDS, VCCS, etc.
Whether participants have gained appropriate skills, attitudes, and/or knowledge	For self-selection purposes	The purpose and degree of success of our activities
How successful a learning activity has been by measuring it against a benchmark for assessment		

Sharing some thoughts from the experts:

- Angelo and Cross write about the connection between teaching and learning: The central aim of all colleges is to help students learn more effectively and efficiently than they could on their own. There is no such thing as effective teaching in the absence of learning. Teaching without learning is just talking.
- Cross and Steadman write that “classroom assessment consists of small-scale assessments, conducted continually in college classrooms by discipline-based teachers to determine what students are learning in that class.”
- D.W. Farmer & E.A. Napieraiski write that “Effective assessment must begin with real concerns of the stakeholders and result in useful information and recommendations related to the purpose of assessment.”

Focus on student rather than teacher performance. From the perspective of classroom assessment, the meaning of “doing a good job” in the classroom shifts the emphasis from performing better as a teacher to understanding and improving student learning. When developing goal or objective statements, they must address learning outcomes. Goals must be **learner centered** (statement of what will the student be able to DO as a result of a learning activity).

Often college courses are “content-driven” rather than “goal-driven.” Most courses address goals beyond simple covering the content, and learning facts and principles. Higher order goals may be woven throughout the course in a subtle manner and therefore are more difficult to assess.

Most faculty members have a list in the back of their minds of ideas they would like to try “someday” to improve both teaching and learning. A classroom assessment project can provide impetus for putting these ideas into practice. As you work on developing assessment plans for student learning outcomes, answer these two questions:

(1) One problem my students have that I want to work on is ... or something I’d like to gather some student feedback on is ... or something I’m not sure about is... and

(2) Ideally, the information I collect will tell me ... .

### **Course grades versus Course Assessment:**

Course grades do not provide the same insight that a course assessment does.

- Grades give a global evaluation but do not provide sufficiently detailed information about which course outcomes students are mastering well and which are giving them trouble.
- Course grades alone don't stimulate faculty discussions about how to improve student learning of particular course outcomes.
- Grades sometimes are based on more than mastery of course content; for example, participation, attendance, bonus points.
- Grading standards often vary widely among different instructors and do not indicate the same degree of mastery of course outcomes.
- Grade inflation (easy tests, generous grading, extra-credit bonuses) sometimes presents a misleading indicator of student mastery of course outcomes.

**Benefits of Course Assessment:**

Course assessment benefits students when it leads to improved learning of the course content; the faculty benefit as well. The course assessment process provides one of the few opportunities for faculty to discuss course content with each other and based on the results of an assessment, determine how they can improve student learning in the course.

<b>Potential Benefits of Course Assessment</b>	
Because Assessment can provide information about the knowledge and skills students have when they enter and exit a course	<b>Faculty Members Can</b> design instruction to target the knowledge and skill levels students should have upon finishing a course and better determine the level of thinking or reasoning appropriate for the course. Faculty can revise the course outcomes to include more higher-order thinking and greater intellectual rigor; obtain more consistency in how general education outcomes are taught; or reduce grade inflation by linking test and course grades to demonstrated mastery of student learning outcomes.
Because Assessment can provide reliable data on student learning and information from student evaluations	<b>Faculty Members Can</b> rely less on the comments that appear on student evaluations as indicators of success in teaching.
Because Assessment can make available richer data about the effects of the curriculum or teaching methods	<b>Faculty Members Can</b> engage in more productive conversations contact with full-time and part-time faculty about the status of student achievement, explore other ways of assessing student learning outcomes, and make better decisions about how it might be improved.
Because Assessment can yield more reliable data about instruction	<b>Faculty Members Can</b> make reliable decisions about innovations or experimental projects in instruction, share successes more easily, and explore active learning strategies and other teaching methods.
Because Assessment can provide evidence that faculty members make a difference in student learning	<b>Faculty Members Can</b> enjoy satisfaction in their work as educators.
Because Assessment can offer a larger view of student needs and accomplishments	<b>Faculty members Can</b> identify directions for future instructional development.
Because Assessment rests largely in the hands of the faculty	<b>Faculty members Can</b> become the primary decision-makers in regard to setting learning goals, identifying processes for assessing them, determining whether they have been reached, recommending future directions, and changes to college policies or administrative practices that impact student learning.

### Getting started:

The first thing to do is use your **Program Assessment or Course Assessment Template** (located at the end of this document) and develop your measurable outcomes/objectives that have a target performance level for success (i.e. 70% will ...).

### LEARNING OUTCOMES/OBJECTIVES:

Learning Outcomes/Objectives are **brief, clear** statements **that describe** desired outcomes. Program and/or course assessments **MUST** assess Student Learning Outcomes (SLO's). SLO's are specific types of outcomes/objectives which define the **Knowledge, Skills, Values, and Attitudes (Beliefs)** the students will have achieved as a result of their educational experience in the course/program. Learning outcomes can be cognitive, behavioral, or affective. These outcomes should be specific, measurable competencies that your students (course assessment)/graduates (program assessment) should be able to perform upon completion of your course/program that accurately reflects their educational preparation. A statement that you offer the course/program to "prepare or train students for "xyz" occupation is not a program objective or learning objective. Outcomes are used as a benchmark for assuring course and/or program effectiveness.

#### Tips in Writing Measurable Outcomes/Objectives

(See also <http://www.adprima.com/objectives.htm> )

Refer to the College's Strategic goals when setting Outcomes/Objectives to ensure they reflect the College mission and purpose. In addition, this will aid in the compilation of an institution-wide Strategic Plan.

Limit outcomes/objectives to **at least two but no more than five**. Keep things short and simple (Keep it Simple-Stupid).

Establish a criterion **target performance level for success**. This will allow your Objective/Outcome to be measurable. You must ask yourself what level is acceptable and then seek to sustain or enhance that performance (i.e. 70% will ...).

You don't have to nor should you assess everything every year. Keep the assessment process manageable and meaningful (M&M).

Avoid assessing the same outcomes/objectives every year to ensure you are documenting continuous improvement.

For each outcome/objective, define one or more simple measures. The more measures you define, the more data (evidence) you will gather.

In creating objectives and outcomes, it is useful to use Bloom's Taxonomy and associated action verbs.

<b>Bloom's Taxonomy &amp; Associated Action Verbs</b>							
<b>Level I: Knowledge</b>							
Arrange	Describe	Identify	List	Quote	Recognize	Select	Tell
Count	Draw	Indicate	Locate	Read	Record	State	Trace
Define	Duplicate	Label	Name	Recite	Relate	Tabulate	Write
<b>Level II: Comprehension</b>							
Associate	Contrast	Discuss	Give an example	Paraphrase	Represent	Rewrite	
Change	Convert	Distinguish	Illustrate	Predict	Restate	Simplify	
Classify	Describe	Estimate	Interpret	Recognize	Review	Summarize	
Compute	Differentiate	Explain	Locate	Report	Revise	Translate	
<b>Level III: Application</b>							
Apply	Construct	Employ	Interpret	Predict	Produce	Transfer	
Calculate	Contribute	Establish	Operate	Prepare	Project	Translate	
Chart	Discover	Examine	Order	Relate	Provide	Use	
Choose procedures		Find solutions		Report	Schedule	Utilize	
Collect information		Illustrate	Organize	Restate	Sketch	Write	
Complete	Dramatize	Implement	Perform	Review	Solve		
<b>Level IV: Analysis</b>							
Analyze	Contract	Contrast	Detect	Discriminate	Generalize	Outline	Separate
Break down		Correlate	Determine	Distinguish	Infer	Prioritize	Solve
Appraise	Categorize	Criticize	Diagram	Experiment	Inspect	Question	Summarize
Conclude	Compare	Debate	Differentiate	Inventory	Organize	Select	
<b>Level V: Synthesis</b>							
Assemble	Compile	Design	Facilitate	Integrate	Negotiate	Prescribe	Reorganize
Build	Compose	Devise	Formulate	Invent	Organize	Produce	Specify
Collaborate	Construct	Detect	Generate	Manage	Plan	Propose	Substitute
Collect	Create	Develop	Generalize	Modify	Prepare	Relate	Unite
<b>Level VI: Evaluation</b>							
Appraise	Compare	Decide	Estimate	Justify	Rate	Select	
Argue	Conclude	Defend	Evaluate	Measure	Recommend	Support	
Assess	Contrast	Determine	Grade	Predict	Revise	Test	
Choose	Critique	Develop	Judge	Rank	Score	Verify	

Notes:

- All levels of learning are important. The lower levels support the higher levels; the higher levels cannot function effectively without the lower levels.
- Higher levels are more complex, not necessarily more difficult. Difficulty depends on prerequisite knowledge and skills.
- The verb used does not guarantee the cognitive level. The action must be presented in a context that ensures the appropriate level is addressed.

To model writing student learning objectives in a straightforward and non-threatening manner, the following chart uses levels of understanding from Bloom's Taxonomy, combines them with action verbs, and provides examples for a variety of disciplines.

**Examples of Student Learning Objectives (SLO) Using Bloom's Taxonomy:**

If I want to measure <b>knowledge</b> outcomes, I might write...	<b>The student will...</b> <ul style="list-style-type: none"><li>– Describe the basic components of empirical research.</li><li>– Give examples of major themes or styles in music, art, or theatre.</li><li>– Recognize in complex text local, rhetorical, and metaphorical patterns.</li></ul>
If I want to measure <b>comprehension</b> outcomes, I might write...	<b>The student will...</b> <ul style="list-style-type: none"><li>– Correctly classify a variety of plant specimens.</li><li>– Explain the scientific method of inquiry.</li><li>– Summarize the important intellectual, historical, and cultural traditions in music, art, or theatre from the renaissance to modern times.</li></ul>
If I want to measure <b>application</b> outcomes, I might write...	<b>The student will...</b> <ul style="list-style-type: none"><li>– Demonstrate in the laboratory a working knowledge of lab safety procedures.</li><li>– Apply oral communication principles in making a speech.</li><li>– Compute the area of a room.</li><li>– Use editing symbols and printers' marks.</li></ul>
If I want to measure <b>analysis</b> outcomes, I might write...	<b>The student will...</b> <ul style="list-style-type: none"><li>– Distinguish between primary and secondary literature.</li><li>– Diagram a sentence.</li><li>– Listen to others and analyze their presentations.</li><li>– Differentiate between historical facts and trivia.</li></ul>

<p>If I want to measure <b>synthesis</b> outcomes, I might write...</p>	<p><b>The student will...</b></p> <ul style="list-style-type: none"> <li>– Revise faulty copy for a news story.</li> <li>– Formulate hypothesis to guide a research study.</li> <li>– Create a poem, painting, design for a building.</li> </ul>
<p>If I want to measure <b>evaluation</b> outcomes, I might write...</p>	<p><b>The student will...</b></p> <ul style="list-style-type: none"> <li>– Compare art forms of two diverse cultures.</li> <li>– Critically assess an oral presentation.</li> <li>– State traditional and personal criteria for evaluating works of art.</li> <li>– Draw conclusions from experimental results.</li> </ul>

Writing effective student learning outcomes requires that they be both precise and objective (measurable). SLO's that are vague or can't be linked to solid measurement (assessment) tools are not effective. For instance: Look at the following four possible SLO's for a statistics class:

1. This course will teach students about statistics
2. This course will teach students about statistical tests
3. In this course, students will learn how to use statistical tests.
4. In this course, students will learn how to choose the most appropriate statistical test for a given problem.

Given that SLO #4 is the best written, let's look at the other three first.

SLO #1 is problematic for a couple of reasons. First, it's far too vague and doesn't focus in on any one skill. Second, it's not written from a *learner* perspective. Instead, it's written from the perspective of "what we will teach you", not what the student will learn from the class.

SLO #2 is also written from a teaching rather than a learner perspective. It's also too vague and is very hard to measure.

SLO #3 is getting closer to our desired goal. It presents the learner perspective and is slightly more focused.

SLO #4 is the best as it not only utilizes the learner perspective but it creates a well defined and measurable goal. SLO #4 is measurable because the wording is clear and points to a specific goal.

Once you have created your student learning outcomes, your emphasis shifts to measurement. Below are examples of measurable student learning outcomes/objectives:

- 90% of graduates will demonstrate that they are proficient in oral communication skills.
- 70% of the math students will be able to plot a quadratic equation using a graphic calculator in 2 minutes or less.
- 80% of students completing the ITE course will pass the certification test.
- 70% of Education graduates will pass the PRAXIS test.
- 80% of graduates in the nursing program will pass the NCLEX licensure examination.
- 90% of graduates from the “xxx” program will be employed in the degree field within 6 months of graduation.
- 75% of students will be able to analyze and interpret financial statements.
- 75% of students will be able to compose, edit, and format office documents using correct grammar, punctuation, and spelling.

## EVALUATION METHOD TO MEASURE OUTCOMES:

A measure is a tool(s) used to determine if you have met your expected outcome. To increase the likelihood of valid results, you should use **more than one** measure for each outcome/objective if possible. If you are struggling to identify a measure ask the following questions about your outcome/objective (see also <http://www.unf.edu/acadaffairs/IE/alc/>):

How will we know if this is being accomplished?

What will provide us this information?

Writing Effective and Measurable Objectives: The A-B-C-D Model		
Element	Description	Example
<b>A = Audience</b>	Who is performing the action? Learning objectives are always stated in terms of student outcomes.	Following completion of the Science program, <b>the student</b> should be able to plot a quadratic equation using a graphing calculator in two minutes or less.
<b>B = Behavior</b>	What will the student be able to do? Use an action verb that describes an accomplishment that is <u>measurable</u> . Be specific. Choose a verb that expresses the skill and cognitive level that you want the student to exhibit. (See Bloom's Taxonomy)	Following completion of the Science program, the student should be able to <b>plot a quadratic equation</b> using a graphing calculator in two minutes or less.
<b>C = Condition</b>	Give the conditions under which the performance will occur. Be specific. Conditions should communicate the situation, tools, references, or aids.	<b>Following completion of the Science program</b> , the student should be able to plot a quadratic equation <b>using a graphing calculator</b> in two minutes or less.
<b>D = Degree</b>	Describe the minimum criteria for acceptable student performance. Define expectations regarding accuracy, quality, and speed. Be specific	Following completion of the Science program, the student should be able to plot a quadratic equation using a graphing calculator <b>in two minutes or less</b> .
Note: Current educational practices recommend that the <u>audience</u> (student) and the <b>behavior</b> be connected with the terms " <u>should be able to</u> " since faculty cannot promise that everyone <b>will</b> accomplish the stated objective.		

Another method to help you develop student learning outcomes is to use the S.M.A.R.T method. All goals/objectives must have the following:

S.M.A.R.T Objectives to Generate Outcomes	
<b>Specific</b>	<ul style="list-style-type: none"> <li>• A specific objective has a much greater chance of being accomplished than a general goal (Who, What, Where, When, Which and Why)</li> <li>• General Goal – This year I am going to get into shape.</li> <li>• Specific Objective – This year I am going to join a health club and workout 3 days a week.</li> </ul>
<b>Measurable</b>	<ul style="list-style-type: none"> <li>• Establish concrete criteria for measuring progress toward the attainment of each objective you set</li> <li>• Stay on track, reach target dates and experience achievement</li> <li>• How much? How many? How will I know when it is accomplished?</li> </ul>
<b>Attainable</b>	<ul style="list-style-type: none"> <li>• When you identify objectives that are most important to you, you begin to figure out ways you can make them come true.</li> <li>• You develop attitudes, abilities, skills, and financial capacity to reach them.</li> <li>• You can attain most any goal you set when you plan your steps WISELY and establish a time frame that allows you to carry out those steps.</li> </ul>
<b>Realistic</b>	<ul style="list-style-type: none"> <li>• To be realistic, an objective must represent something towards which you are both WILLING and ABLE to work.</li> <li>• Your objective is probably realistic if you truly BELIEVE that it can be accomplished.</li> </ul>
<b>Timely</b>	<ul style="list-style-type: none"> <li>• An objective should be grounded within a timeframe. With no timeframe tied to it there's no sense of urgency.</li> <li>• When you set a timeframe, then you have set your unconscious mind into motion to begin working on the goal.</li> </ul>

20 Bad Words			
Avoid using verbs that are difficult to measure objectively. Following are examples of verbs difficult to assess, and should be used with caution:			
Appreciate	Comprehend	Grasp significance of	Realize
Be aware	Cover	Have faith in	Recognize
Be comfortable with	Enjoy	Internalize	Study
Be acquainted with	Familiarize	Know	Understand
Believe	Gain knowledge of	Learn	Value

For best results, use both direct and indirect measures and qualitative and quantitative measures.

Below are some examples of the types of measures you might use (see also <http://www.provost.wisc.edu/assessment/manual/manual2.html> ).

**Direct measures**—require students to display their knowledge and skills as they respond to the instrument itself. This is the most important measure for a Student Learning Outcome. Examples include students’ scores on national standardized exams such as the Core Competencies Assessments, Program Exit, or Certification Exams, Pre-test/Post-test Evaluation, Comprehensive exams, Capstone Course Evaluation, Course-Embedded Assessment, Student Portfolios, Employer evaluations, Use of Rubrics, etc.

**Indirect measures** – subjective measures of beliefs, attitudes and perceptions. Here students reflect on their learning rather than to demonstrate it. Indirect measures are often used to supplement direct measures. Examples include questionnaires and surveys of student’s perceptions such as the CCSSE, Student Survey, Graduate Survey, Employer Survey, etc. Additional measures could include focus groups, exit interviews of graduates, employment data, graduation rates, retention rates, analysis of grade distribution, curriculum/syllabus analysis, and transfer rates.

**Qualitative**—measures rely on descriptions rather than numbers such as verbal or written feedback from students/staff/faculty, etc... Examples include ethnographic studies, exit interviews, formal recitals, participant observations, writing samples, and open-ended questions on surveys.

**Quantitative** – measures assess teaching and learning by collecting and analyzing numeric data using statistical techniques. Examples include GPA, grades, primary trait analysis scores, exam scores, demographics, forced-choice surveys, and standardized teaching evaluations.

## **FINDINGS/RESULTS:**

List the results based on the measure (methods & tools) used. This does not need to be overly complicated. The purpose of this section is to determine if your outcomes/objectives were met. Be sure to discuss your data in relation to outcomes/objectives and specifically, the target performance level you set in to measure.

If you do not meet your objective and the set Target Performance Level (perhaps only 75% of the returned employer surveys positively evaluate the communication skills of graduates), **don't panic**. This feedback provides data for you to decide what you might do differently to improve those skills (**Hint: Action Plan**). The changes you propose will be a part of your improvement plan for the next year. Remember, the purpose of assessment is to help us determine if we are being effective and to allow us to document continuous improvement in programs and student learning outcomes.

## **ACTION TO BE TAKEN/CLOSING THE LOOP:**

This is where you show how you “closed the loop.” You must answer the following:

How will you use your results?

What actions were taken or will be taken based on your data?

For example, in the classroom you might use the Muddiest Point assessment (See <http://www.siu.edu/~deder/assess/catmain.html> ) ; let students know in the next class period that 50% of the class identified “X” as the muddiest point so let’s review this concept before moving on. Second, use data to make inform decisions and support actions designed to further improve learning outcomes the next time the course is taught.

If you did not meet your Outcomes/Objectives you **MUST** have an action plan. If you plan to implement changes based on your findings, you must discuss these, particularly when findings **support planning** and **budgetary decisions**. If this is the case with your findings, please let your academic dean know and/or if applicable, include in the “**Resources needed**” section of your Program Review. Here you will discuss how your findings affect planning and the budget if applicable.

In summary, in doing course/program assessment, you should start looking at (1) What are your (objectives) for the course/program with a target performance level for success? (2) How do you plan to measure each objective (direct and/or indirect)? (3) Record for each objective what

your findings/results are. (4) How will you close the loop (action) to improve on student learning outcomes next semester in your course/program? Successful assessment creates action by confirming current practices or initiating change (improvement).

**Examples of Course Assessment:**

<b>Student Outcomes Assessment Plan</b>			
<b>Goal/Learning Objectives</b>	<b>Evaluation method</b>	<b>Findings/Results</b>	<b>Action to be Taken</b>
(With Target Performance Level for Success (i.e. 70% will ...))	(To Evaluate Expected Outcomes, (Direct and/or Indirect))		<b>(Closing the loop)</b>
MUS 121 (Music Appreciation I) 75% of students will be able to differentiate between good music, such as Led Zeppelin and bad music.	The assessment tool will be an essay question embedded in the mid-term exam. The question will be developed by at least two faculty members who agree that the question sufficiently measures achievement of the intended learning outcome. A scoring rubric will be created, both faculty will score each students essay and the average score will be recorded. At least 80% of the students will receive a score of satisfactory or better.	Only 30% of students received a satisfactory score.	The assessment instrument was shown to other faculty within the department and deemed to be satisfactory. The learning goal was deemed a worthy goal.  Faculty consensus was that a change was needed in the course content; specifically, three additional hours per semester of listening to Led Zeppelin will be assigned.
ITE 115 (Introduction to Computer applications and Concepts) 75% of students will be proficient in computer skills using weekly quizzes.	Evaluation of weekly quizzes vs. similar class not using weekly quizzes	Students who took weekly quizzes were 78% successful in being proficient in computer skills vs. 71% for students who did not take weekly quizzes.  90% of students' evaluations were very positive in use of weekly quizzes as a strategy to improve student learning.	Incorporate weekly quizzes into the course
ITE 215 (Advanced Computer Application) 80% of students will be	Pre-certification skill based testing, completion of course and	The ITE 215 includes industry certification in Microsoft applications. Combined scores for Fall, 2007 and	Although the results are sufficient, we are still going to change the pre-

proficient in office application by obtaining industry certification	certification testing	Spring, 2008 showed a 91% pass rate for certification. This compared to 80% from last year.	certification testing software that we use because the current product has performance issues.
ITN 101 (Introduction to Network Concepts) 100% of students will be able to assemble a TCP/IP network	Students completely assemble and test a TCP/IP network. The network includes a wireless segment.	90% of students assembled a working network including a wireless segment. In addition, computer support specialist students take many courses where network information resources are used. Computer Hardware and Software students take additional courses to set up special parts of the network. For many of these students this will include setting up a router.	Currently the overall network operability is the element that is evidence of successful completion. The course will be revised to include more detailed checklists so students can discover particular strengths and weaknesses in their abilities.
<b>Program Assessment:</b> 80% of Hardware & Software Graduates (212-18) will obtain industry certification	Industry Certification Test	In fall 2007, 90% of graduates taking the industry certification test for Microsoft Application passed compared to 80% in Fall 2006, and 50% in Fall 2005.	No change in program at this time except to encourage 100% of graduates to take the test.
BIO 141 (Human Anatomy & Physiology I) 75% of students will be able to correctly utilize the search engines of the internet to gather data and information	Instructor will review the information, etc. collected, the bibliographies, and determine if the information is from a reliable source	Students had some difficulty in doing good searches and determining if the information they were getting was from a reliable source (ca. 90% had difficulty in doing this to meet the science dept. standards)	Work with classes and demonstrate how a good search is performed (link on the science dept. website) and how to determine the reliability of sources (government, universities, private research, etc)
BIO 141 (Human Anatomy & Physiology I) 75% of students will be able to understand and apply the concept of the scientific method to laboratory exercises	Students will submit lab reports that show their observations, analysis, and conclusions	The majority of students (ca. 80%) were able to complete this without much difficulty.	Work with students who had trouble performing this learning objective.  Meet with other faculty to discuss strategies for student improvement.
BIO 142 (Human Anatomy & Physiology II) students who use good study habits (study groups) perform better than students who don't	Study group students should outperform students who are not involved in a study group.	Study group averaged final grade = 81 Class average = 77 All A&P courses (3) average = 73	The study group students outperformed others. Instructor will encourage the formation of more study groups for science courses.
ENG 1 (Preparing for College Writing I) 80% of students will	Completed essay using objective being assessed with score of 70%.	90% of students achieved a minimum score of 80% on final writing.	Computer lab administrative assistant will assist students needing extra help

compose, edit, and format word document using correct grammar, punctuation, and spelling.			with this objective. Additional handouts will be posted in Bb to help weaker students.
ENG 1 (Preparing for College Writing I) 75% of students will analyze and critique an article from <i>College English</i> .	Journal article critique will be written with appropriate documentation.	70% of students achieved a minimum score of 70% on the critique using appropriate documentation.	Tutoring will available for students having difficulties. Course syllabus will be modified to have more discussion on this topic.
ENG 1 (Preparing for College Writing I): 100% of students will use the online resources with the textbook to practice concepts taught in class.	Students will submit exercises with their Portfolio showing their practice.	33% of students enrolled completed online practice exercises.	Instructor will require in-class practice for students to assist them and show the relevance of the online practice.
ENG 111 (College Composition I) 90% of students will compose, edit, and finalized an argumentative composition free of grammar, usage, and mechanics errors. The composition will fairly examine both sides of the argument without elements of bias.	Instructor will use VCCS generated rubric along with teacher modifications on the rubric to evaluate the compositions.	75% of students successfully composed an argumentative composition without grammar, usage, and mechanics errors and without elements of bias. Fairness was shown for both views.	Instructor will examine the patterns of those who did not complete or pass in the assignment. Instructor will be certain to conference with students who have shown a pattern of inconsistency with completing such assignments. Meet with developmental English faculty to see how we can bridge any gaps between ENG 1, ENG 3, and ENG 111.
PSY 201 (Introduction to Psychology I) 75% of students will demonstrate the ability to distinguish between correlational relationships between variables and cause & effect relationships between variables	Test questions items will address both the literal meanings of correlation vs. cause & effect and require its application	Analysis of test items for Fall Semester, 2007, finds that 74% of students in PSY 201 correctly answered the literal test question items. 62% of students correctly answered the application questions.	In addition to my regular coverage of the concepts, I will create a Critical Thinking and Concept Check in-class exercise that will address the distinction between correlation vs. cause & effect.
SOC 201 (Introduction to Sociology I) 75% of students will accurately identify the literal meaning of ethnocentrism and accurately demonstrate the ability to apply the	Test questions items will assess the student knowledge of the meaning of ethnocentrism and its application.	Analysis of test items for Fall Semester, 2007, finds that 78% of students in SOC 201 correctly answered the literal test question items. 64% of students correctly	In addition to my regular coverage of the concept of ethnocentrism, I will develop a project in which students have to identify current, real world, examples of ethnocentrism.

concept		answered the application questions.	
IND 111 (Materials & Processes of Industry I) 75% of students will be able to apply math and science concepts to solve IND problems	Apply math and science concepts to solve Industrial technology problems	50% of students have difficulty solving problems without teacher intervention	Develop more practice problems with real life applications and develop a check list for students to follow.
HLT 116 (Personal Wellness) 90% of students will complete a personal nutritional assessment.	Compare the average grade on nutrition project  Percentage of students completing all parts of the assignment	Students often leave out portions of the assignment. They don't know how to analyze their results Fall 2007 9 out of 25 (36%) did an excellent job on the project 11 out of 25 (44%) left out a significant part 5 out of 25 (20%) did not do the project at all Class avg. grade = 67 AVG grade (not counting those who did not try) = 78	Break assignment into separate parts. Assign extra reading to prepare students for analyses. Have students complete a sample analysis with data I give them. Grades for the separate parts will be combined for the total grade.
NUR 136 (Principles of Pharmacology I) 90% of students will be proficient in dimensional analysis in the calculation of drug measurements	Student Evaluations  Performance on quizzes	18% failed due to errors such as, decimal placement, long division, multiplication, and rounding errors. Student evaluations recommended class is taught 2 days a week. Have longer lecture hours and tutoring. Offer more one-on-one instruction. Allow to see every test or quiz before taking next quiz. More in-class assignments and have student teach sometimes.	Modified course to increase time on basic math errors.  Increased the number of in-class assignments.  Discuss with other faculty other strategies to increase student proficiency in dimensional analysis

## Internet Resources for Assessment

General Principles of Assessment: <http://www.tcc.edu/welcome/collegeadmin/OIE/SOA/principles.htm>

Writing Measurable Learning Outcomes: <http://www.adprima.com/objectives.htm>

Evaluation Methods to Measure Outcomes by Programs: <http://www.unf.edu/acadaffairs/IE/alc/>

Types of Measures: <http://www.provost.wisc.edu/assessment/manual/manual2.html>

Action Strategies to Closing the Loop: <http://www.siue.edu/~deder/assess/catmain.html>

Rubric Creations: <http://rubistar.4teachers.org/index.php>

Towson Assessment Resources: [http://pages.towson.edu/assessment/office\\_of\\_assessment.htm](http://pages.towson.edu/assessment/office_of_assessment.htm)

NC State Assessment Resources: <http://www2.acs.ncsu.edu/UPA/assmt/resource.htm>

College of Du Page Resources: <http://www.cod.edu/outcomes>

Assessment Peer Review Electronic Journal: <http://PAREonline.net>

Virginia Assessment Group (VAG): <http://virginiaassessment.org/RPAJournal.php>

National Council on Measurement in Education (NCME): <http://ncme.org>

American Educational Research Association: <http://aera.net>

## Program Assessment Plan

### Student Outcomes

*<Your Specific Program Being Assessed for Academic Year>*

<b>Student Outcomes Assessment Plan</b>			
<b>Goal/Learning Objectives</b> <small>(With Target Performance Level for Success (i.e. 70% will ...)</small>	<b>Evaluation method</b> <small>(To Evaluate Expected Outcomes, (Direct and/or Indirect))</small>	<b>Findings/Results</b>	<b>Action to be Taken</b> <b>(Closing the loop)</b>
<b>Program Objective 1</b>			
<b>Program Objective 2</b>			
<b>Program Objective 3</b>			

## Course Assessment Plans

For

*< Course Being Assessed for Term You Are Teaching >*

Course Outcomes Assessment Plan			
Goal/Objective Being Assessed  (With Target Performance Level for Success (i.e. 70% will ...))	Evaluation method  (To Evaluate Expected Outcomes, (Direct and/or Indirect))	Findings/Results	Action to be Taken  (Closing the loop)
<b>Course Objective 1</b>			
<b>Course Objective 2</b>			
<b>Course Objective 3</b>			

## **SACS Standards Relating to Assessment**

- 2.5 The institution engages in ongoing, integrated, and institution-wide research-based planning and evaluation processes that incorporate a systematic review of programs and services that (a) results in continuing improvement and (b) demonstrates that the institution is effectively accomplishing its mission.
- 2.7.3 The institution requires in each undergraduate degree program the successful completion of a general education component at the collegiate level that
  - (1) is a substantial component of each undergraduate degree
  - (2) ensures breadth of knowledge, and
  - (3) is based on a coherent rationale.
- 3.3.1 The institution identifies expected outcomes for its educational programs and its administrative and educational support services; assesses whether it achieves these outcomes; and provides evidence of improvement based on analysis of those results.
- 3.4.1 The institution demonstrates that each educational program for which academic credit is awarded (a) is approved by the faculty and the administration, and (b) establishes and evaluates program and learning outcomes.
- 3.4.12 The institution places primary responsibility for the content, quality, and effectiveness of its curriculum with its faculty.
- 3.4.13 For each major in a degree program, the institution assigns responsibility for program coordination, as well as for curriculum development and review, to persons academically qualified in the field.
- 3.5.1 The institution identifies college-level competencies within the general education core and provides evidence that graduates have attained those competencies.
- 3.7.2 The institution regularly evaluates the effectiveness of each faculty member in accord with published criteria, regardless of contractual or tenured status.
- 3.7.3 The institution provides evidence of ongoing professional development of faculty as teachers, scholars, and practitioners.

- 4.2 The institution maintains a curriculum that is directly related and appropriate to its purpose and goals and to diplomas, certificates, or degrees awarded.