

COLLEGE OF ARTS AND SCIENCES
ASSESSMENT HANDBOOK



College of Arts and Sciences

Fayetteville State University

April 2012

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COLLEGE OF ARTS AND SCIENCES ASSESSMENT HANDBOOK

Foreword

The Fayetteville State University (FSU) College of Arts and Sciences (CAS) Assessment Handbook offers faculty members guidance as they design and implement instruction that will provide high quality learning experiences. The document provides a resource to inform instructional planning, choose appropriate measurement instruments, determine targets, and use data to make evidence-based decisions. Faculty members should benefit from specific information regarding the methodology and procedures related to assessment practices.

The CAS Assessment Handbook is the product of the CAS Assessment Coordinator, with guidance from the FSU Associate Vice Chancellor for Academic Affairs and Vice Chancellor for Academic Affairs.

Chapter I: FSU University and College of Arts and Sciences

University Mission Statement

Fayetteville State University (FSU) is a public comprehensive regional university that promotes the educational, social, cultural, and economic transformation of southeastern North Carolina and beyond. The primary mission of FSU is to provide students with the highest quality learning experiences that will produce global citizens and leaders as change agents for shaping the future of the State. Awarding degrees at the baccalaureate and master's levels, and the doctorate in educational leadership, FSU offers programs in teacher education, the arts and sciences, health professions, business and economics, and unique and emerging fields. FSU is an institution of opportunity and diversity. Committed to excellence in teaching, research, scholarship, and service, the university extends its services and programs to the community, including the military, and other educational institutions throughout North Carolina, the nation, and the world. (Approved FSU Board of Trustees, Oct. 31, 2008)

University Vision Statement

Fayetteville State University is a leading institution of opportunity and diversity committed to developing learned and responsible global citizens.

College of Arts and Sciences Mission Statement

The mission of the College of Arts and Sciences is to provide high quality educational programs, courses, and activities in arts, humanities, natural sciences, and social sciences at the undergraduate and graduate levels, thus enabling students and graduates to contribute to society and to lead productive lives.

College of Arts and Sciences 5-Year Vision Statement (2011 – 2016)

By 2016, all informed observers will affirm that the College of Arts and Sciences (CAS) is a critical component of Fayetteville State University's (FSU) vision to be an important force for "educational, cultural, social, and economic transformation in southeastern North Carolina and beyond." The primary way in which CAS will promote transformation is by developing graduates with skills, knowledge, and dispositions in the areas needed for transformation.

1. CAS is recognized for promoting significant and relevant learning through high-quality and innovative teaching as reflected in:
 - a. 100% of all the academic degree programs assess student learning outcomes and the use of those results to continuously improve instruction
 - b. Accredited degree programs
 - c. Enriching and engaging in innovative educational experiences (online education, learning communities, global awareness, integrative learning, and summer school intersession, etc.)
2. CAS has strong retention and graduation rates for first time freshmen students and transfer students as reflected in an 80% one-year retention rate for all undergraduate and graduate students in the College of Arts and Sciences
3. CAS is recognized for having faculty, staff and academic programs which are exceptionally friendly to traditional students, transfer students and the military as reflected in:
 - a. 90% of the students in CAS taking the advising survey will report that they are satisfied or very satisfied with their academic advising in the major
 - b. 3.30 or higher will be the mean score on the graduating senior survey in reference to the "entire educational experience" for the College of Arts and Sciences
 - c. The establishment of national and international memoranda of understanding, dual enrollment programs and dual degree programs

4. CAS faculty members are known for their dedication to scholarly work and community engagement as reflected in:
 - a. Extramural grants submitted each year
 - b. Funding received through extramural grants
 - c. Scholarly publications and creative activities reported in digital measures
 - d. Intellectual and cultural programs

5. CAS is known for its effective and efficient management of resources based on strong assessment as reflected in:
 - a. Raising of private funds
 - b. Effective budget management and accountability

Composition of the College of Arts and Sciences

The College of Arts and Sciences functions under the leadership of the Dean and his Administrative Staff, consisting of an Assistant Dean, Director of Research, Assessment Coordinator, Belk Distinguished Professor of Science and Technology, an Administrative Associate, and an Administrative Secretary.

The College of Arts and Sciences is comprised of 13 departments, offering Baccalaureate degrees in Biological Sciences, Chemistry and Physics, Communication, Criminal Justice, English, Government and History, Math and Computer Science, Nursing, Performing and Fine Arts, Psychology, Social Work, Sociology, and World Languages and Cultures. The College confers Master's degrees in the disciplines of Biology, Teaching Biology, Social Work, Mathematics, Psychology, Sociology, and Criminal Justice. Each department is led by a Department Chair, guiding support staff and faculty.

The College of Arts and Sciences is accredited by the Southern Association of Colleges and Schools (SACS), in addition to program accreditations and certifications for Computer Science, Criminal Justice, Music, Nursing, and the Master of Social Work.

Purpose: Making Evidence-Based Decisions

The purpose of the CAS Assessment Handbook is to facilitate efforts of the faculty and administration to make evidence-based decisions in the best interests of students and the University. The document will serve as a guide to outline effective procedures to design instructional or institutional goals, determine appropriate measurements, collect and analyze data, and use the results to inform decision-making.

Assessment in the College of Arts and Sciences serves three purposes:

- Verifying student learning
- Recording progress toward academic and institutional goals in the FSU Strategic Plan
- Facilitating continuous improvement through data-driven decisions

Strategies that are based upon research or evidence are more likely to reveal best practices to achieve academic and institutional goals. The College of Arts and Sciences is committed to making evidence-based decisions to support the mission of Fayetteville State University.

About the Handbook

The CAS Assessment Handbook is a production of the CAS Assessment Coordinator and maintained by the CAS Assessment Committee, comprised of Assistant Department Chairs and faculty members assigned to work with assessment in their departments. The Handbook is produced in consultation with the Dean of the College of Arts and Sciences, the Associate Vice Chancellor for Academic Affairs, and the Provost and Vice Chancellor for Academic Affairs.

Layout of Handbook

The CAS Assessment Handbook is divided into eight chapters, dealing with different aspects of assessment for faculty and administrators. They address cognitive levels, program assessment, teacher education programs, measurement instruments, methodology and procedures of assessment, the Operational Plan and Assessment Report, the Continuous Improvement Report (CIR), and the Quality Enhancement Plan (QEP). Examples featuring multiple disciplines within the College of Arts and Sciences are included, accompanied by a glossary for clarification of assessment terms.

Fayetteville State University Strategic Plan

Fayetteville State University adopted a Strategic Plan designed to serve as a blueprint to achieve specific goals and objectives between 2009 and 2014. The Plan is updated on an annual basis in an effort to achieve six priorities:

1. Retention and Graduation Rates
 - a. Initiative – Increase retention and graduation rates
 - b. Initiative – Improve Academics and Co-Curricular Programs
 - c. Initiative – Attract and retain faculty/staff
 - d. Initiative – Enhance attractiveness to students
 - e. Initiative – Improve student services/satisfaction
 - f. Initiative – Improve facilities and technology

2. Economic Transformation
 - a. Initiative – Conduct economic transformation needs assessments
 - b. Initiative – Distribute trend data
 - c. Initiative – Establish community partnerships
 - d. Initiative – Pursue a leadership role in the Base Realignment and Closure (BRAC) Initiative
 - e. Initiative – Share innovation and entrepreneurship best practices
3. Intellectual and Cultural Center
 - a. Initiative – Enhance culture and education
 - b. Initiative – Partner with the Community and Public Schools
 - c. Initiative – Enhance Marketing and Communication
 - d. Initiative – Set the standards for international programming
4. Leaders and Global Citizens
 - a. Initiative – Promote international and intercultural education
 - b. Initiative – Develop international, value-added programs
 - c. Initiative – Increase international partnerships
5. Collaborations and Partnerships
 - a. Initiative – Expand collaborations and partnerships
 - b. Initiative – Increase collaboration in research and scholarship
 - c. Initiative – Collaborate for service, service learning, and outreach activities
 - d. Initiative – Collaborate to support academic achievement and experiential learning
6. Fiscal Resourcefulness and Sustainability
 - a. Initiative – Maximize use of funds
 - b. Initiative – Expand grants and contracts
 - c. Initiative – Increase private support
 - d. Initiative – Develop/implement an environmental sustainability program

The College of Arts and Sciences can use assessment procedures to measure the progress of units and academic programs toward the attainment of each priority, or goal. Academic programs within the 13 departments will report their assessment strategies, data, and use of results on individual program assessment forms. The Administration of the College of Arts and Sciences and the departmental units will report their progress toward institutional goals in an Operational Plan and Assessment Report (OPAR). The outcomes of the OPARs are reported online, through the use of a data management system (TaskStream). Reports on program assessment and OPARs will be compiled and analyzed each semester.

Chapter II: Student Learning Outcomes

Section I: Student Learning Outcomes

Purpose

Student learning outcomes (SLOs) in higher education offer specific descriptions of the skills, knowledge, or dispositions that will be achieved in a particular course of study (Otter, 1995). SLOs may be expressed as outcomes at the level of an individual course (Course Learning Outcomes) or as outcomes at the level of graduation from a program (Program Learning Outcomes). They can potentially help adult learners by stating expectations with greater clarity than traditional objectives.

Difference between Student Learning Outcomes and Objectives

Student learning outcomes are expressed in a manner that supports the verification of learning by asking two questions:

- What should my students know and be able to do at the end of the course?
- How will I know that they have achieved this goal (demonstrated proficiency)?

Educational objectives are often written to describe the overall learning goal, without references to specific activities or skills that students will perform. The following statements offer an example of the difference between objectives and student learning outcomes.

Objective:	To develop an understanding of Shakespearean literature
Outcomes:	To analyze the social context of Shakespearean plays
	To compare and contrast the use of linguistic terms and phrases
	To examine the relevance of Shakespearean concepts of human behavior

The student learning outcomes provide descriptions of activities that allow adult learners to comprehend the expectations they must fulfill. In addition, they imply the use of assignments and activities with measurable outcomes (Otter, 1995).

Examples

Sample Student Learning Outcomes by Course

Course	Student Learning Outcome
ENGL 335: Issues in Professional Writing	The learner will compose an original paper written in a professional writing style
BTCH 360: Molecular Genetics	The learner will explain the concept of gene expressions The learner will apply gene functions to molecular evolution
PHIL 360: Modern Philosophy	The learner will analyze the concepts of Existentialism The learner will debate the arguments of the Rationalists and the Empiricists

It should be noted that the student learning outcomes mentioned above are merely samples and do not represent all of the knowledge and skills that would be required in the courses.

Section II: Program Learning Outcomes

Purpose

Program Learning Outcomes (PLOs), also referred to as PSLOs, are types of Student Learning Outcomes (SLOs). They refer to the knowledge, skills, and dispositions that students should know when they graduate from a program of study. Students at that level should be able to function at a level of mastery of the subject matter, demonstrating higher-order critical thinking skills and making evidence-based decisions.

Educators who are planning the curriculum should determine which major goals they want graduates entering the field to achieve. Program Learning Outcomes should be selected based upon an educational rationale (national standards, industry best practices, etc.) that justifies their inclusion in the curriculum. The PLOs should be expressed as a few broad statements that represent the expectations of professionals in the field. More specific expectations and skills will be stated in the form of Course Learning Outcomes (CLOs), which occur in the individual classes.

Program Learning Outcomes (PLOs) can be measured by embedding a measurement instrument (test, assignment, or performance task) in certain required, upper-level courses. This ensures that majors in a discipline will have demonstrated proficiency in the PLOs upon graduation. Once a course has been chosen to assess a PLO, all sections of that course must contain a suitable and

consistent measurement instrument for it. It should be noted that other tests, assignments, and performance tasks in the course sections can be different, reflecting the activities and discussions that occurred in the teachers' classes. The measurement instruments chosen for evaluation of Program Learning Outcomes must be consistent enough to offer a valid assessment across course sections.

Program Learning Outcomes should be accompanied by a calendar of assessment cycle or sustainability map that identifies the multi-year assessment plan. This reveals which PLOs will be measured in a given semester or year and how they will be assessed. For instance, a PLO may be measured every spring semester using an exit exam. See Calendar of Assessment Cycle or Sustainability Map in Chapter IV: Methodology.

Review the Rubric for Assessing the Quality of Academic Program Learning Outcomes to learn the standards for well-developed outcomes (see Appendix III).

Examples

Sample Program Learning Outcomes

Program	Program Learning Outcomes
BS Computer Science	Design, implement, and evaluate a computer-based system, process, component, or program to meet desired needs
BA Political Science	Explain content, issues, concerns and debates within sub-fields: American politics, Comparative politics, International relations, Public administration, and Political theory
BS Nursing	Use information and communication technologies to document and evaluate client care, advance client and professional education, reduce medical errors, and inform the public about the profession

Section III: Course Learning Outcomes

Purpose

Course Learning Outcomes (CLOs), also called CSLOs, are types of Student Learning Outcomes (SLOs). They refer to the knowledge, skills, and dispositions that are required of students in individual courses. They give specific information to adult learners regarding the activities and expectations they must fulfill in a class.

Course Learning Outcomes are used to build the students' knowledge base throughout their academic career, one class at a time. Together, the courses prepare the students to fulfill the Program Learning Outcomes (PLOs) that are required of their disciplines. A measurement instrument (test, assignment, or performance task) that measures a Program Learning Outcome can be embedded within a required upper-level course. This ensures that the majors in a program will have demonstrated proficiency in the Program Learning Outcomes necessary for graduation.

Examples

Sample Course Learning Outcomes

Course	Course Learning Outcomes
ART 230: Introduction to Ceramics	<p>The learner will apply wheel throwing procedures to create works of pottery</p> <p>The learner will apply procedures of glaze utilization on ceramic works</p>
BIOL 225: Scientific Communication	<p>The learner will analyze and critique a scientific paper</p> <p>The learner will compose an original scientific paper, citing credible sources</p>
CHEM 324: Kinetics	<p>The learner will calculate activation parameters using the Arrhenius theory</p> <p>The learner will analyze factors affecting the transport properties of gases</p>

Section IV: Core Learning Outcomes

University College Core Curriculum

Fayetteville State University's University College administers the Core Curriculum, providing assistance to students until they complete the courses or are admitted to a major degree program. The Core Curriculum serves as the academic foundation for all undergraduate degree programs, requiring students to achieve learning outcomes in the following categories: Communication Skills, Reasoning Skills (Critical Thinking and Quantitative Literacy), Scientific Literacy, Global

Literacy, Inquiry Skills, Humanities and Creative Arts, and Ethics and Civic Engagement. The learning goals represented by each curricular area may be expressed as Core Learning Outcomes.

Certification Process

The framework for the University College Core Curriculum requires exposure to course content that provides 21st Century learners with critical thinking skills, communication skills, global perspectives, cultural references, and other academic offerings to prepare them to function as responsible citizens in a participatory democracy and a competitive economy. Courses that gain inclusion in the Core Curriculum will undergo a rigorous process to consider their academic content and appropriate fit within specific curricular categories.

Core Advisory Committees have been established for each curricular area. Their purpose is to determine the Student Learning Outcome and design rubrics to measure achievement. In addition, each committee examines requests for course certification in their curricular area. The Chairpersons of each Committee join with the Dean of the University College to form the membership of the Core Steering Committee, which oversees all activities related to Core Curriculum. The approval process for inclusion in the Core Curriculum is as follows:

Existing Courses

- Fill out a Course Certification form. Include a syllabus and rubric (that is consistent or identical to the rubric from the Core Advisory Committee for that curricular area).
- An existing course will be submitted to the relevant Department Curriculum Committee.
- The Course Certification form will then be considered for a vote by the Department faculty and signed by the Department Chair.
- The Course Certification form and course syllabus will be submitted to the appropriate Core Advisory Committee. For instance, a course in World Languages may be submitted to the Global Literacy Committee. Successful requests will be signed by the Committee Chair.
 - The course instructor may be asked to include a description of the criteria for success in the course.
 - The course must be consistent with the rubric that the Core Advisory Committee established for that curricular area. It is best to contact the appropriate Committee Chairperson to obtain the rubric in advance.
- The Core Steering Committee will vote on the approval of the course, including it in the University College Core Curriculum.

New Courses

A new course will need to follow the guidelines common to the Academic Affairs approval process. Courses that are also proposed for inclusion in the University College Core Curriculum will undergo an additional review process.

- Fill out a Substantive Change form and a Course Certification form for the new course. Include a syllabus and rubric (that is consistent or identical to the rubric from the Core Advisory Committee for that curricular area).
- Submit the materials to the Department Curriculum Committee for consideration.
- The measure will be voted upon by the Department faculty. The Non-Substantive Change form and Course Certification form will be signed by the Department Chair.
- The materials must be sent to the College Academic Affairs Committee. Upon approval, the forms will be signed by the Academic Affairs Committee Chair and the Dean of the College of Arts and Sciences.
- The request will then be submitted to the appropriate Core Advisory Committee (Global Literacy, Communication Skills, etc.). Successful requests will be signed by the Committee Chair.
- The materials will be submitted to the Core Steering Committee for consideration. Once approval is granted, the documents will be signed by the Committee Chair.
- Approved courses will be submitted to the Faculty Senate Academic Affairs Committee for consideration.
- The courses will then be considered by the full Faculty Senate.
- Approved courses will be submitted to the Office of Academic Affairs.
- The courses will finally be submitted to the Office of the Chancellor.

The Course Certification form necessary to gain approval for inclusion in the University College Core Curriculum can be viewed in the Appendix.

Section V: Bloom's Taxonomy

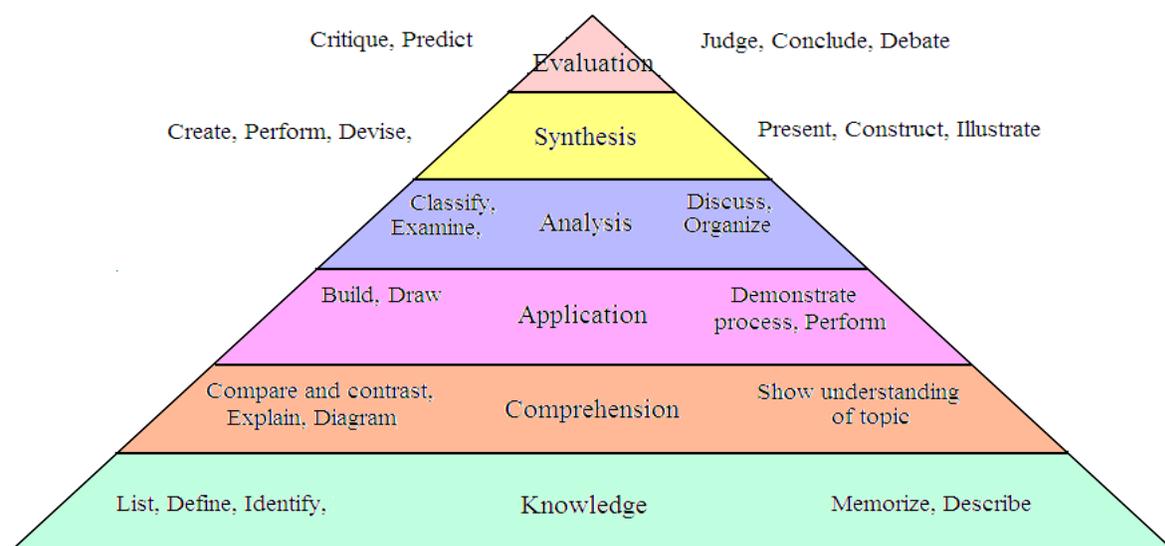
History

Dr. Benjamin Bloom was an educational psychologist who found in 1956 that most test questions required only low level knowledge skills (rote memorization of dates, names, and facts). He devised a taxonomy (rank order) of thinking skills, from simple to complex. In 1984, he published *Taxonomy of Educational Objectives Book 1: Cognitive Domain*. He also wrote works dealing with the affective and psychomotor domains.

Components

The thinking levels in Benjamin Bloom's taxonomy consist of six categories representing specific cognitive processes: Knowledge, Comprehension, Application, Analysis, Synthesis, and Evaluation.

- Knowledge – the simplest of cognitive processes, this thinking skill involves the recognition and recall of important facts, dates, or events. It is consistent with activities such as listing, identifying, defining vocabulary words, and other related tasks.
- Comprehension – this thinking skill implies a deeper understanding of a concept, enabling a student to perform the following tasks: explaining, illustrating, drawing a diagram, summarizing, paraphrasing, and other related assignments.
- Application – this category represents a student's ability to demonstrate or use a skill, process, or procedure. This can include: calculating an equation, performing a task, using lab equipment, demonstration of an artistic production process, or other related assignments.
- Analysis – this category is a higher-order thinking skill which involves an examination of a topic, subject, or object, consideration of its interrelated parts, and devising conclusions or theories regarding its relation to its component parts or the larger environment. Activities can include: scientific experiments, research projects, case studies, examinations of a subject, classification or organization of interrelated topics or component parts, discussion, and other related tasks.
- Synthesis – this higher-order thinking skill requires the creation of an original product that integrates (synthesizes) various elements of knowledge. For instance, an art project about a social topic would require the student to incorporate knowledge of artistic processes and the elements of design and composition with an understanding and opinion of a social topic. Activities can include: multimedia projects, presentations, artworks, constructing or engineering an original design for a machine, performing a musical or theatrical work, construction of an original musical or vocal composition, creative writing, or other related works.
- Evaluation – this is the highest-order thinking skill on Bloom's original taxonomy. It requires students to make judgments about a topic or the relative value of an argument based on objective, credible evidence. Activities can include: article critiques, defense of a thesis, art critiques, debating recent court cases, political, or economic theories, and other related tasks.



Bloom's Taxonomy

Classification of Thinking Skills

Source: Bloom, B. S. (1956). *Taxonomy of Educational Objectives*. Allyn and Bacon. Boston, MA.

Uses

Educators at the K-12 and collegiate levels have used Bloom's Taxonomy for decades to determine the thinking levels that their students should demonstrate. This allowed the development of instructional plans that gradually moved students from lower-level knowledge skills (introduction of topic) to higher critical thinking skills (mastery of topic). Lesson plans and activities that occur when a topic or skill is first introduced may involve the transmission of facts, procedural details, and vocabulary (knowledge level). As the instructional unit progresses, the activities should require increasing levels of cognitive difficulty (comprehension, application, analysis, etc.).

Examples

Examples representing different disciplines in the College of Arts and Sciences will be given in Section VI, addressing New Bloom's Taxonomy.

Section VI: New Bloom's Taxonomy

History

Dr. Lorin Anderson, a former student of Benjamin Bloom, worked with David Krathwohl, one of Bloom's former colleagues to revise the taxonomy of thinking skills. Together, they edited *A Taxonomy for Learning, Teaching, and Assessing: A Revision of Bloom's Taxonomy of Educational Objectives, Complete Edition*, featuring the works of Peter W. Airasian, Kathleen A. Cruikshank, Richard Mayer, Paul Pintrich, James Raths, and Merlin Wittrock. The book was published in 2001 and shared a two-dimensional framework for thinking skills (cognitive process and knowledge).

Components

The new taxonomy represents a continuum ranging from concrete thinking skills (factual knowledge) to more complex, abstract thinking skills (metacognitive). The knowledge dimension is therefore divided into four categories: Factual, Conceptual, Procedural, and Metacognitive. The categories encompass six levels of thinking skills (Remembering, Understanding, Applying, Analyzing, Evaluating, and Creating).

New Bloom's Taxonomy

Thinking Skills	Cognitive Processes / Sample Activities
Remembering – Retrieve relevant information from long-term memory	
Recognizing; Recalling	Recalling dates and events from history
Understanding – Construct meaning from a variety of messages or information	
Interpreting	Paraphrase the statements or documents; Share reasoned insights into the author's intent
Exemplifying	Give an example of specific economic theories in action
Classifying	Place the lists of living organisms into the correct category (mammals, reptiles, fish, insects, invertebrates, or birds)
Summarizing	Write a brief description of the events relayed in the story
Inferring	Determine what is implied in the author's writings
Comparing	Compare and contrast the cultures and systems of two ancient civilizations
Explaining	Explain the causes of an historical event; Explain the process of photosynthesis
Applying – Use a procedure	
Executing; Implementing	Conduct a lab experiment using approved safety procedures
Analyzing – Examine a topic or object in detail, break it down into component parts, determine how the parts relate to one another; Theorize about the relation of the topic or object to broader subjects.	
Differentiating, organizing, attributing	Distinguish among the effects of hypotonic, hypertonic, and isotonic solutions upon cells
Evaluating – Make judgments based upon objective criteria	
Critiquing, defending	Defend your thesis based upon credible evidence
Creating – Produce an original design or project, brought together from multiple	

elements or information	
Generating, planning, producing	Design an original multimedia project sharing your views on the topic (based upon credible evidence)

Source: Anderson, L., Krathwohl, D., Airasian, P., Cruikshank, K., Mayer, R., Pintrich, P., Raths, J. & Wittrock, M. (2001). *A Taxonomy for Learning, Teaching, and Assessing: A Revision of Bloom's Taxonomy of Educational Objectives*. Longman. New York, NY.

The terminology of the new taxonomy places the suffix 'ing' at the end of each term, changing them to action verbs. In addition, the thinking level known as Creating (Synthesis in the original version) is now placed at the top of the hierarchy, above Evaluating (which used to be at the top). It is reasoned that students would need to engage in some levels of evaluation of information and theories before they can incorporate them into an original presentation or project. Therefore, Creating is the highest thinking level (in New Bloom's Taxonomy).

Uses

The language of New Bloom's Taxonomy gives educators a means of describing the specific thinking skills that students will demonstrate as they complete their academic tasks. This increases the likelihood that teachers will plan a variety of instructional activities. Thus, students may be required to remember important dates or facts, apply certain procedures or processes, analyze and organize information, or create an entirely new product based upon their research and ingenuity.

When teachers design their student learning outcomes, they will include the term from New Bloom's Taxonomy that corresponds to the thinking skill the students will use (Remembering, Understanding, Applying, Analyzing, Evaluating, or Creating). **It is best to use higher-order thinking skills, especially for program learning outcomes (PLOs)**. This is due to the fact that PLOs describe the knowledge, skills, and dispositions that graduates of your program will be able to demonstrate. Upon graduation, students should be able to perform beyond the level of remembering facts or important dates. They should be able to analyze, evaluate, create their own projects and theories, and exemplify the critical thinking process.

Once teachers have chosen a thinking level, they will decide what type of assignment or activity will be used to demonstrate that level of cognition. **It is imperative that the assignment matches the thinking level.** For instance, a task of defining vocabulary words would not match the Analyzing or Evaluating thinking levels. Vocabulary activities would match the Remembering thinking level. This type of mismatch between activities and thinking levels is a common error that improves with practice.

Examples

Student Learning Outcome Examples with New Bloom's Taxonomy

Discipline	Student Learning Outcome Featuring New Bloom's Thinking Level	Sample Assignment
Biological Sciences	The learner will demonstrate analysis of anatomy by examining and determining the relationship among major organs of a dissected pig.	Dissect a pig, examine the major internal organs, and write a brief description of the manner in which the organs are interrelated.
Chemistry and Physics	The learner will demonstrate application of Newton's Second Law of Motion (relationship of force, mass, and acceleration) through an experiment.	Place two bowls of sugar underneath two objects of dissimilar mass (rock and a foam ball). Drop the objects at the same time. Observe and record: (1) their relative rate of speed and (2) the size of the craters they create in the bowls of sugar (revealing difference in mass). Record differences and observations.
Communication	The learner will demonstrate analysis of telecommunications law by examining and theorizing about the relevance of copyright laws in the information age.	Students will research copyright laws and debate or explain their use in the information age.
Criminal Justice	The learner will demonstrate evaluation of ethical practice in Criminal Justice by defending/critiquing a law enforcement practice	Students will study contemporary issues in law enforcement practices. They will debate, defend, or critique a specific practice, citing credible evidence to support their positions.
English	The learner will create an original literary composition through creative writing	Students will select a topic and produce an original creative writing composition.

Discipline	Student Learning Outcome Featuring New Bloom's Thinking Level	Sample Assignment
Government and History	The learner will demonstrate evaluation of political theories by defending or critiquing a contemporary political solution to a social/economic problem	Students will examine competing political solutions to a social/economic problem in contemporary society. The learner will (individually or in groups) defend or critique a political solution, citing credible evidence to support their positions.
Math and Computer Science	The learner will demonstrate application of mathematical algorithms by calculating an equation using the Gauss-Jordan elimination.	Students will complete an assignment or test featuring a series of equations using the Gauss-Jordan elimination.
Nursing	The learner will demonstrate analysis of pharmacokinetics by examining and explaining the effects of specific toxins.	Students will research the effects of specific toxins when externally applied to the body and explain the results, interactions, and potential dangers.
Performing and Fine Arts	The learner will demonstrate application of brass performance techniques by playing a musical composition	Students will practice and perform a musical composition on brass instruments and reflect upon their technical skills.
Psychology	The learner will demonstrate analysis of adolescent cognitive development by researching a case study	Students will research case studies in adolescent cognitive development and debate or explain the theoretical principles demonstrated in each example.
Social Work	The learner will create an original plan for a community program that can facilitate healthy interactions	Students will design an original plan for a non-profit community program or organization to facilitate healthy human development within a social environment

Discipline	Student Learning Outcome Featuring New Bloom's Thinking Level	Sample Assignment
Sociology	The learner will demonstrate evaluation of treatment measures related to deviant behavior by defending/critiquing specific practices	Students will research contemporary practices in the diagnosis and treatment of deviant behavior, and then offer a defense or critique, supported by credible evidence.
World Languages and Cultures	The learner will demonstrate application of conversational Spanish by engaging in effective communications with students or teacher	Students will divide into pairs and engage in conversation (entirely in Spanish), correctly using dialects, grammar, and sentence structure.

Note that the thinking levels in the student learning outcomes match the type of activity given in each example.

Chapter III: Measurement

Student learning must be verified (measured) to ensure that graduates have achieved proficiency in the necessary knowledge, skills, and dispositions proscribed by the faculty. In addition, data regarding student learning can be analyzed and used to make evidence-based decisions to improve performance. This process is facilitated through the use of measurement instruments.

Section I: Measurement Instruments

A measurement instrument an assignment, project, test, performance task, or other method used to determine student proficiency. The recorded performance on the task (instrument) will provide the evidence (measurement) of student learning. Program faculty can choose which measurement instruments are most appropriate for the content and thinking levels they want students to demonstrate. It is important that the instrument chosen matches the desired thinking level from New Bloom's Taxonomy (Remembering, Understanding, Applying, Analyzing, Evaluating, or Creating). In addition, activities that involve informal assessments (science projects, research projects, writing assignments, art projects, musical/theatrical performances, etc.) should be accompanied by a rubric to maintain the objectivity and clarity of the process. It is often helpful to use a rubric when the measurement instrument does not automatically yield quantitative (numerical) results. Instruments to measure student performance may include but are not limited to the following examples:

- Exams – An exam (including exit exams) may be a standardized test or designed by faculty. It can be correlated with each thinking level on New Bloom's Taxonomy as long as it contains a variety of questions designed to use critical thinking skills.
- Standardized Tests – Several disciplines have an industry-standard test or licensure exam. They are often designed to measure student performance at various thinking levels.
- Research Projects – These are excellent measurements of students' abilities in Applying, Analyzing, and Evaluating. It is important to include a rubric to ensure the objectivity and clarity of the grading process.
- Writing Assignments – Whether one engages in reflective writing, creative writing, or professional writing, these assignments can function as measures of students' abilities in Applying, Analyzing, Evaluating, and Creating. Include a rubric to ensure the objectivity and clarity of the grading process.
- Reflective Writing – This type of assignment may offer insight into students' thoughts regarding ethical practices and complex theories (political, philosophical, scientific, etc.). It is useful in demonstrating the cognitive processes of Analyzing and Evaluating. It is useful to include a rubric to ensure the objectivity and clarity of the grading process.

- Science Projects – This activity is excellent to demonstrate students’ abilities in Applying, Analyzing, and Evaluating. Include a rubric with this project to facilitate objectivity and clarity in the grading process.
- Art Projects – This type of assignment utilizes students’ abilities of Applying, Evaluating (as they decide what to include or exclude and why), and Creating. It is necessary to use a rubric to ensure the objectivity and clarity of grading decisions.
- Art Critique – This activity uses students’ powers of Analyzing and Evaluating. Use a rubric to maintain objectivity and clarity in the grading process.
- Musical / Vocal / Theatrical Performance – These activities can demonstrate Applying, Analyzing, Evaluating (as students make decisions about the nuances of their performances), and Creating. It is useful to employ a rubric to maintain objectivity and clarity in the grading process.
- Oral Presentation / Examination / Defense – These activities demonstrate students’ work in Applying, Analyzing, Evaluating, and Creating. Use a rubric to facilitate objectivity and clarity in grading decisions.
- Embedded Test Questions – This method can involve collaboration by teachers to embed previously agreed-upon test items in an examination. Student performance on the embedded questions can be used to measure specific Program Learning Outcomes (PLOs). The questions can be designed to meet any thinking level in New Bloom’s Taxonomy.

Measurement Instruments and Thinking Levels

Measurement Instrument	Thinking Level	Rubric
Exit Exams (Standardized or Faculty-Designed)	Remembering, Understanding, Applying, Analyzing, Evaluating, and Creating	No
Embedded Test Questions	Remembering, Understanding, Applying, Analyzing, Evaluating, and Creating	No
Multiple-Choice Test	Remembering (Usually)	No
Multiple-Choice Test designed with items of increasing difficulty	Remembering, Understanding, Applying, Analyzing, Evaluating, and Creating	No

Measurement Instrument	Thinking Level	Rubric
Writing Assignments (Research, Position Paper, Reflective Writing, Creative Writing, etc.)	Remembering, Understanding, Applying, Analyzing, Evaluating, and Creating	Yes
Research Project	Remembering, Understanding, Applying, Analyzing, Evaluating, and Creating	Yes
Science Project	Remembering, Understanding, Applying, Analyzing, Evaluating, and Creating	Yes
Art Critique	Analyzing and Evaluating	Yes
Art Project	Applying, Evaluating, and Creating	Yes
Oral Presentation / Defense / Debate	Applying, Evaluating, and Creating	Yes
Musical / Vocal / Theatrical Performance	Applying, Evaluating, and Creating	Yes

It is important that **the instruments used to measure Program Learning Outcomes (PLOs) should exist independently of routine classroom assignments.** It will be included in the students' grades, holding them accountable, but it is specifically designed to measure a PLO. This lends greater credibility and objectivity to the process. The program faculty may collaborate to create or approve appropriate tests, assignments, and/or performance tasks to verify student achievement of PLOs.

It should be noted that **consistency is necessary** when measuring student proficiency in attainment of PLOs. **Once a measurement is selected for use with a particular required upper-level course, it should be used in every section of that course.** This does not mean that every aspect of all assignments or tests in the course must be the same. However, **one assignment, project, test, or set of embedded test items should be consistent** to allow fair measurement of student proficiency in a PLO.

Remember that **consistency does not necessarily mean that every aspect must be identical**. For instance, a Program Learning Outcome that measures students' ability to analyze subject matter and write proficiently in a professional writing style (APA, MLA, etc.) may be demonstrated through persuasive writing, informative, expository, or other types of written assignments. An example from the arts may involve the measurement of students' ability to use the elements of design (line, color, space, texture, value, shape, and form). This can be accomplished through the use of a drawing, painting, digital image, or other form of artistic production. The assignments are not identical, yet they are measuring the same skill (and could use the same rubric).

Faculty should note that the use of different assignments, rubrics, or terminology can impact the results, causing difficulty in the validity of the measurement instrument. Therefore, faculty should work to ensure that the requirements of the assignments are valid measurements of the PLO.

- Program faculty are encouraged to develop or select one assignment or set of test items that will serve as the measurement for a particular PLO.
- The chosen measurement (assignment, project, test, etc.) should be administered once in each section by the faculty. If a rubric is used for evaluation, it should be the same for each section of the course.
- Tests can use one of two options:
 - An entire test can be developed or selected for use in all sections of a course.
 - A set of selected test items (10, 15, questions, etc.) can be embedded in one test given in all sections of a course. These individual test items can be used to measure the PLO. The rest of the test items may be different, reflecting the learning, discussions, and activities that occurred in each individual teacher's section.
- The remaining assignments and tests can reflect the individual teaching styles of the faculty.

Capstone courses may be used to provide evidence of student learning because they often require majors to demonstrate proficiency in most of the PLOs. If a capstone course is selected to provide evidence, it may be useful to rotate the faculty members teaching the course, to ensure that program assessment is a shared responsibility.

Validity

The validity of a measurement instrument (test, assignment, or performance task) refers to the extent to which it measures what it purports to measure (Kubiszyn & Borich, 2007). For

instance, a test that is designed to measure a student's ability to perform computer-related skills should measure that particular set of skills. If the computer skills test was administered only as a multiple-choice test, it may not represent the actual ability of a student to produce projects or graphs with a computer. The most successful students may be the ones who have stronger reading skills or stronger test-taking skills. It may not necessarily mean that they would be as proficient if asked to produce a project on a computer. Likewise, a test of musical performance skills would not be well served by a written examination. Difficulties with validity are often more subtle. A few types of validity are:

- **Content Validity** – This concept asks whether the test questions actually correspond to the information or skills (content) that the instructor wants to teach. Two factors that can potentially affect content validity include the reading level (less accessible language) and poorly constructed test items that may be misleading.
- **Criterion-Related Validity** – This measure of validity asks whether the scores from a test can be correlated with an outside measure (another test, real-world application, etc.) of the desired skill. There are two sub-categories of this type of validity:
 - **Concurrent Criterion-Related Validity** – This type of validity occurs when two measures (tests, performance-based assessments, etc.) can be administered at the same time. One measure should already be an accepted and valid test. The other measure is the test you seek to validate. If the results of the two measures are highly correlated, it is likely that your test has validity.
 - **Predictive Criterion-Related Validity** – This refers to the accuracy of the test in predicting future behavior or performance; Often used in regards to aptitude tests (ACT, SAT, etc.) and their ability to predict success in college.
- **Construct Validity** – This refers to the extent to which the test behavior (construct) correlates with other information or theories (other constructs). It often denotes a logical connection between the test and other theories or expectations. For instance, it is logical that a bilingual student from Guatemala would perform well on a test of conversational Spanish. Likewise, it is logical to expect that students who have received extensive tutoring in mathematics would perform well on an algebra test (Kubiszyn & Borich, 2007).

Reliability

Reliability of a measurement instrument (test, assignment, or performance task) suggests that the results will be similar whenever the test is administered (if the academic characteristics of the students are similar). While some variation may be expected, the scores should not differ vastly each time the test is given. A test that does not demonstrate reliability may not be well designed and might not represent the true abilities of the students. There are several means of testing the reliability of an instrument, including the following:

- Inter-rater Reliability – This occurs when two or more evaluators score the same test according to the same rubric or set of expectations. If the evaluators arrive at similar scores or estimates of performance, the test is likely a reliable measurement of that skill.
- Test-retest Reliability – This can be achieved by giving the same test on two occasions to the same group of students, preferably with a small period of time in between the tests. Reliable tests will show a high correlation between the two test results. Note: the longer period of time that elapses between tests, the lower the correlation. This is not to suggest that every test should be given twice to all students. It may be useful, however, to try a test-retest with a sample of students to check the reliability of a new test (Kubiszyn & Borich, 2007).

Section II: Rubrics

Rubrics

Rubrics are used by educators as scoring guides for assignments. The term *rubric* is derived from the Latin word for *red*. The color red was once used in Catholic writings and legal books in order to bring attention to important passages (Burke, 2011). Today, rubrics provide clarity for students and educators by indicating the amount of points that will be given to each category or task within an assignment.

Rubrics allow the instructor to offer feedback to students regarding specific areas of performance in different categories. For instance, a writing rubric may share the ratings for a student's proficiency in presenting evidence to support an argument, word usage that shows variety of terms and sentence length, use of appropriate professional writing style, and spelling and grammatical ability. Rubrics are particularly useful for informal assessments such as portfolios, research projects, creative writing, reflective writing, science experiments, artworks, musical performances, theatrical performances, and other assignments that may contain procedural steps or potentially subjective components.

Instructional Uses of a Rubric

Rubrics provide a useful tool for assessment, but it is important to note that they can serve as an instructional resource. If a student is given a scoring rubric only after the assignment is complete, it reveals the reasons why a certain grade was given. The student can view his/her performance on each indicator or category within the assignment. However, a rubric presented to students *before* the assignment tells *exactly what level of performance is needed to demonstrate proficiency or excellence in the task*. Students may then use the rubric to guide their work, checking the performance descriptors in each category to ensure that they are meeting the standards.

Components of a Rubric

A rubric is comprised of three components:

- Ratings – titles to indicate performance levels, which may include: Excellent, Outstanding, Accomplished, Proficient, Satisfactory, Developing, Novice, Emerging, Fair, or Unsatisfactory.
- Criteria or Categories – specific tasks or skills demonstrated within an assignment. For instance, a science experiment may contain categories for Procedure, Statement of Hypothesis, Written Conclusion, etc. Students would learn how many points are given for each area.
- Descriptors of Quality – Each criterion or category should have specific descriptions of the characteristics of excellent work, proficient work, fair work, or unsatisfactory work. For instance, a writing rubric may describe incomplete sentences, spelling and grammatical errors, and incoherent statements as unsatisfactory. It may describe well-constructed sentences, citations of evidence to support a thesis, and few or no spelling or grammatical errors as proficient or excellent (Burke, 2011).

Components of Rubric for Electronic Presentation (Excerpt)

The table is a 2x5 grid. The columns are labeled 'Excellent', 'Proficient', 'Fair', and 'Unsatisfactory'. The rows are labeled 'Content (50 Points)' and 'Images, Video, and Objects (20 Points)'. Callouts point to the 'Ratings' column header, the 'Descriptors' column header, and the 'Criteria or Categories' column header.

Criteria or Categories	Excellent	Proficient	Fair	Unsatisfactory	Descriptors
Content (50 Points)	Introduces and explains important issues relevant to the subject. Thesis statements are supported with evidence cited in references.	Demonstrates competent comprehension of the subject matter. Statements are supported with evidence.	Shows little comprehension of the subject matter. Statements are not sufficiently supported with evidence.	Use of plagiarized elements. Shows little comprehension of the subject matter. Statements are not sufficiently supported with evidence.	
Images, Video, and Objects (20 Points)	Uses multiple images, video, or objects (at least 2 or more per frame) appropriate to the subject and audience.	Uses multiple images, video, or objects (at least 2 per frame) appropriate to the subject and audience.	Uses 1 image, video, or object per frame. Objects are vague, unclear, or inappropriate to the content.	Uses no images, video, or objects in a frame. Text or presentation lacks visual appeal or interactive content.	

Examples

The following rubrics provide examples of the structure and descriptors that may be used with different assignments. The ratings, criteria, and descriptors can be changed to suit the needs of individual instructors, assignments, or courses.

Writing Rubric

Category	Excellent	Proficient	Fair	Unsatisfactory
Content (50 Points)	Introduces and explains important issues relevant to the subject. Thesis statements are supported with evidence cited in references.	Demonstrates competent comprehension of the subject matter. Statements are supported with evidence.	Shows little comprehension of the subject matter. Statements are not sufficiently supported with evidence.	Use of plagiarized elements. Shows little comprehension of the subject matter. Statements are not sufficiently supported with evidence.
Organization (20 Points)	Organizes ideas into logical sequences, subtopics, and paragraphs. Includes a summation or conclusion at the end.	Demonstrates competent organization of content into logical sequences. Includes summation or conclusion at the end.	Document is organized in a manner that is vague or difficult to follow.	Document is unorganized and difficult to follow, demonstrating no logical sequence.
Word Choice (20 Points)	Employs a varied and rich vocabulary appropriate to the subject and audience.	Uses competent vocabulary appropriate to the subject and audience	Uses vocabulary that is vague, unclear, or inappropriate	Uses vocabulary that is vague, unclear, or inappropriate to an unacceptable degree
Writing Conventions (10 Points)	Presents ideas in direct, clear, concise sentences. Avoids run-on or incomplete sentences. Uses correct spelling, grammar, and punctuation. Correctly cites sources in APA style.	Demonstrates competent use of spelling, grammar, and punctuation with minimal errors. Correctly cites sources in APA style.	Commits numerous errors in spelling, grammar, and punctuation. Incorrect use of APA style.	Demonstrates unacceptable writing skills, including many grammatical errors and incorrect use of APA style.

Presentation Rubric

Category	Excellent	Proficient	Fair	Unsatisfactory
Presentation (50 Points)	Student uses a clear voice and correct pronunciation of terms so that all audience members can hear presentation. Visual elements are relevant, aesthetically pleasing, effective in focusing attention, and easily understood.	Student uses clear voice and correct pronunciation. Visual elements are relevant, well constructed or arranged, and easily understood.	Presentation or visual display is organized in a manner that is vague or difficult to follow. Student uses low voice or language that may be difficult to understand.	Presentation is unorganized and difficult to follow, demonstrating no logical sequence. Student uses low voice, vague language, or mispronunciations. Images are not relevant or hard to understand.
Knowledge (20 Points)	Explains information relevant to the subject. Thesis statements are supported with evidence cited in references.	Demonstrates competent comprehension of the subject matter. Statements are supported with evidence.	Shows little comprehension of the subject matter. Statements are not sufficiently supported with evidence.	Use of plagiarized elements. Shows little comprehension of the subject matter. Statements are false or not sufficiently supported with evidence.
Analysis (20 Points)	Demonstrates critical thinking by explaining the reasons supporting or rejecting an argument. Positions are supported with evidence.	Demonstrates critical thinking by explaining the rationale for their position.	Shows limited critical analysis of the questions. Gives unclear or incomplete answers.	Does not demonstrate critical analysis of the questions. Answers are unclear, incomplete, or incorrect. No evidence is given to support argument.
Writing and Speaking Conventions (10 Points)	Presents ideas in direct, clear, concise sentences. Students use clear speaking voice with proper pronunciation. Avoids run-on or incomplete sentences. Uses correct spelling, grammar, and punctuation. Correctly cites written sources in APA style.	Demonstrates competent use of speech, elocution, spelling, grammar, and punctuation with minimal errors. Correctly cites written sources in APA style.	Commits numerous errors in pronunciation, spelling, grammar, and punctuation. Incorrect use of APA style.	Demonstrates difficulty in speaking, using a low voice or mispronunciations that make it challenging to understand. Unacceptable writing skills, illegible handwriting, many grammatical errors and incorrect use of APA style.

Chapter IV: Methodology

The College of Arts and Sciences follows procedures to collect and analyze data and report the manner in which it will be used to improve performance. Academic programs will design Program Learning Outcomes (PLOs), determine the measurements to use as evidence of student learning, set targets for performance, and report on suggestions to improve student outcomes.

Program Learning Outcomes

Program Learning Outcomes (PLOs) may be referred to as Program Student Learning Outcomes (PSLOs). They represent the knowledge, skills, and dispositions that students should be able to demonstrate when they have completed the academic program (qualified for graduation). PLOs are a type of Student Learning Outcome, often including broad statements that relate a few major goals that students are expected to attain. Smaller goals are stated as Course Learning Outcomes (CLOs) that occur in individual classes. If PLOs are broad goals, CLOs function as the details that support attainment of the eventual goal (student proficiency at graduation).

PLOs often reference the thinking level within New Bloom's Taxonomy that students are expected to exhibit. The taxonomy (rank order) reveals a continuum of thinking skills, ranging from simple to complex cognitive processes. They include: Remembering, Understanding, Applying, Analyzing, Evaluating, and Creating.

Procedure

The College of Arts and Sciences provides electronic program assessment forms that contain columns for each factor that must be considered (PLOs, Evidence, Target and Actual Results, Use of Results, and Did it Work). The forms are available as Microsoft Word or fillable PDF documents on the College of Arts and Sciences Assessment Web site.

The first column of the program assessment form is devoted to the identification of PLOs (brief statements of the knowledge, skills, or dispositions expected of students). Program faculty will collaborate to decide which PLOs are appropriate for their discipline. These decisions may be based upon national standards, accrediting organizations, industry or professional standards, best practices based upon cited research, or other criteria. The decision to adopt certain PLOs, date of adoption, and source of the standards should be documented. This can be achieved by maintaining minutes of meetings in which the PLOs are discussed. This can be reported in the column cell, supported by an attachment of the minutes if necessary.

Example: Program Learning Outcome Column

Biological Science Program Learning Outcomes
Demonstrate application by utilizing and explaining the scientific method, including designing and conducting experiments and testing hypotheses; Adopted by faculty Aug. 2010 in accordance with National Standards.
Demonstrate analysis of Biological Science by reading, understanding, and critically reviewing scientific information. Adopted by faculty Jan. 2011 in accordance with National Standards.

Note: The example above does not represent all of the PLOs for Biological Sciences. In addition, some of the wording has been changed for illustrative purposes. The dates and sources of adoption are hypothetical.

Evidence

Evidence is necessary to verify student learning. It answers the question, “How do we know that our students achieved the learning goal?” Program faculty will decide which measurement instruments (tests, assignments, or performance tasks) will be used to provide evidence of student achievement of each Program Learning Outcome (PLO). The type of instrument chosen must match the thinking level (Remembering, Understanding, Applying, Analyzing, Evaluating, or Creating) stated or implied in the PLO. For instance, a PLO regarding analysis could be verified using a research project as a measurement instrument. Likewise, a PLO implying the use of evaluation could be documented using a thesis defense, debate activity, or position paper as a measurement instrument.

Procedure

The College of Arts and Sciences provides electronic program assessment forms that contain columns for each factor that must be considered (PLOs, Evidence, Target and Actual Results, Use of Results, and Did it Work). The forms are available as Microsoft Word or fillable PDF documents on the College of Arts and Sciences Assessment Web site.

The column devoted to Evidence will contain a brief description of the measurement instrument (test, assignment, or performance task) that will verify whether students have achieved proficiency in each Program Learning Outcome. If one is using informal assessments that can generate qualitative results (portfolio, writing assignments, research projects, artworks, etc.) it is useful to attach a rubric. This allows evaluators and administrators to better understand the standards used to determine proficiency. If one is using formal assessments that can generate

quantitative results (standardized tests, faculty-designed tests, worksheet using calculation of problems, etc.), it may be useful to attach a sample test. In addition, it is most helpful to attach a few work samples from a few students (qualitative or quantitative).

Example: Evidence Column

Computer Science Program Learning Outcome	Evidence
Design, implement and evaluate a computer-based system, process, component, or program to meet desired needs	Design original computer program, using appropriate algorithms and programming syntax to meet specific needs. Evaluate program effectiveness. Rubric attached.
Analyzing professional, ethical, legal, security, and social issues and responsibilities	Reflective writing assignment analyzing and critiquing professional, legal, and ethical responsibilities in computer science. Rubric attached.

Note: The example above does not represent all of the PLOs for Computer Science. In addition, the activities described are hypothetical. Small changes in the wording of PLOs may have been added for clarity.

The example demonstrates the manner in which the type of measurement instrument must match the Program Learning Outcome. A PLO that requires analysis should be measured with an assignment that requires analysis.

Target and Actual Results

Evaluations of student learning may only provide a snapshot of student performance that has little meaning in the absence of baseline data and target results. Baseline data is an initial measurement of student performance, while target results indicate the faculty's goal for their performance. Together, they facilitate analysis and comparison of results that allow faculty to determine whether growth or improvement has occurred.

Recording the actual results (students' performance or rate of proficiency in a task) shares the distance between the target (expected results) and their current results. If student outcomes are lower than expected, teachers may identify areas of difficulty and make suggestions that can improve their performance. If student outcomes are higher than expected, teachers may adjust their strategies to offer more challenge, raise the expectations now that students have progressed beyond the target level, or focus more on other areas where improvement is needed.

Procedure

The College of Arts and Sciences provides electronic program assessment forms that contain columns for each factor that must be considered (PLOs, Evidence, Target and Actual Results, Use of Results, and Did it Work). The forms are available as Microsoft Word or fillable PDF documents on the College of Arts and Sciences Assessment Web site.

A column in the program assessment form requires teachers to report the target results (expected rate or percentage of student proficiency on the task). In addition, teachers will report the actual results (rate or percentage of student proficiency achieved). The difference, if any, between the two results will inform the teacher if their students are achieving Program Learning Outcomes or are in need of improvement.

Program faculty, as the experts in their disciplines, may decide by consensus which target results (expected percentages of student proficiency) are warranted based upon:

- Past student performance in that particular Program Learning Outcome
- Goals for improvement
- Professional, industry, or national standards

It is useful to report the number and percentage of students in the class that demonstrated proficiency in the task. This allows better understanding of the results. For instance, a 100% proficiency rate may not carry the weight if it is revealed that there are only six students in the class. A proficiency rate of 50% may not be as alarming if it is revealed that only two students took the class that semester. Conversely, a class (or multiple sections of a class) that reports a proficiency rate of 85% will provide more useful data if 65 students were evaluated.

It is imperative that the standard of performance that constitutes proficiency is clarified.

For instance, the target may state that 85% of students will achieve proficiency on an exit exam. What constitutes proficiency? Will 85% of the students score a 100 on the exit exam? Will they score 75 on the exam? State the specific outcomes to facilitate objective comparison of results in subsequent semesters.

Example: Target and Actual Results

Criminal Justice Program Learning Outcome	Evidence	Target and Actual Results
Creative thinking – analyze criminal justice issues and problems to propose original, diverse and sophisticated solutions or interpretations	Compose a paper analyzing a current issue in criminal justice; Propose an original solution that addresses diverse perspectives, based upon credible evidence. Rubric attached.	Target Percentage: 85% Actual Percentage: 91% Proficient students will achieve a score of 83, according to the standards of the rubric
Quantitative reasoning – Compute statistical analyses of data and/or demonstrate ability to interpret meaning of analyses	Analyze and interpret disaggregated data regarding criminal prosecutions using SPSS statistical software. Rubric attached.	Target Percentage: 80% Actual Percentage: 75% Proficient students will achieve a score of 83, according to the standards of the rubric

Note: The evidence and results stated in this example are only hypothetical.

It should be noted that the target and actual results from the hypothetical Criminal Justice example reveal that students are performing well in creative thinking, theoretical analysis, and communication skills. However, they need improvement in quantitative or statistical analysis of raw data. This information would help faculty to design instructional strategies, propose pre-requisite course work, offer or recommend statistical tutoring, or utilize other methods to facilitate student success.

Use of Results

When making evidence-based decisions, the most important information that faculty and administrators can report is the manner in which data or results were used to inform the choices, strategies, or actions taken. The program assessment form for the College of Arts and Sciences provides a column for this information, called the *Use of Results*.

Procedure

The College of Arts and Sciences provides electronic program assessment forms that contain columns for each factor that must be considered (PLOs, Evidence, Target and Actual Results,

Use of Results, and Did it Work). The forms are available as Microsoft Word or fillable PDF documents on the College of Arts and Sciences Assessment Web site.

During the semester, information regarding student proficiency in achieving Program Learning Outcomes will become clear. Data will be available from selected courses that indicates whether students are failing, meeting, or exceeding their targets for performance. Based upon this information, program faculty can make evidence-based decisions or suggestions to improve student learning. These ideas will be reported in the Use of Results column in the CAS program assessment form.

It should be noted that it is not necessary to suggest complete revision of the course or program (unless the data warrants it). Suggestions for improvement may include (but are not limited to) the following:

- Create or revise rubrics for greater clarity
- Revise the course syllabus
- Revise the Program Learning Outcomes or Course Learning Outcomes
- Revise existing course(s); added assignments; modified assignments; modified content of course; changed textbook, etc.
- Create a new course in the curriculum
- Remove an existing course from the curriculum
- Update a course in the curriculum to remain current with technology, industry trends, professional or national standards, or student needs
- Incorporate different instructional strategies: less lecture, more student involvement, integrate technology, Writing across the Curriculum, Reading across the Curriculum, etc.
- Change assessment tools; modify assessment tools, change data analysis, etc.
- Include a new pre-major or pre-requisite course
- Increase or modify criteria for success
- Provide faculty or staff training
- Request additional fiscal resources, additional space, or additional equipment
- Implement new policies, practices, and/or procedures

The program faculty should state how the change will be implemented. Define the tasks to be completed, including a time table, persons responsible, and results reporting required. It is imperative that the results of this effort are reported in the following assessment cycle (under Did it Work).

Occasionally, there will be no suggestion for changes. The suggestion may be to continue current practices to verify consistent proficiency of students over time.

Example: Use of Results

Sociology Program Learning Outcome	Evidence	Target and Actual Results	Use of Results
Differentiate among various sociological theories, their historical development, and apply theory to the explanation nature of various social issues	Conduct a research paper analyzing sociological theories and suggesting a solution to a social issue, citing credible sources. Rubric attached.	Target results: 85% Actual results: 94% Proficient students will achieve a score of 83, according to the standards of the rubric	Given the high rate of student mastery, the rubric standards will be raised to provide greater challenge.
Assess various research methods in sociology and demonstrate effective use of the Statistical Package for the Social Sciences (SPSS) in analyzing research data	Interpret raw data related to a sociological issue using SPSS statistical software. Rubric attached.	Target results: 85% Actual results: 71% Proficient students will achieve a score of 83, according to the standards of the rubric	Encourage tutoring services in SPSS. Use a class period or assignment to reinforce SPSS skills. Revise rubric to provide greater clarity of expectations.

Did it Work?

When engaged in evaluation of student achievement, faculty members will offer suggestions for improvement in the column named *Use of Results*. Faculty members will implement the proposed changes in the next semester or academic year. The CAS program assessment form contains a final column called *Did it Work*, which provides a place for faculty to reflect upon the effectiveness of their suggestions.

Procedure

The College of Arts and Sciences provides electronic program assessment forms that contain columns for each factor that must be considered (PLOs, Evidence, Target and Actual Results, Use of Results, and Did it Work). The forms are available as Microsoft Word or fillable PDF documents on the College of Arts and Sciences Assessment Web site.

If a strategy to improve student achievement of a Program Learning Outcome has not occurred yet, it is not necessary to fill in the column named *Did it Work*. During the next semester or academic year, the suggestions for improvement should be implemented. Therefore, the next time that the CAS program assessment form is completed, it should be possible to make a statement regarding the new strategy. Faculty may use the column to reflect upon the effectiveness or shortcomings of the suggested changes. If they worked, what was the likely cause? What will be improved or maintained in the strategy? If the changes did not work, what was the likely cause? What will be improved or adjusted in the strategy? **The process of continuous improvement is the most important consideration in filling out this column. If the changes didn't work, the process of revising and improving the strategy will eventually lead to desirable results. This is the main goal of program assessment!**

Examples: Did it Work?

BS Mathematics Program Learning Outcome	Evidence	Target and Actual Results	Use of Results	Did it Work? (Filled out in the next semester or academic year)
Demonstrate skills in solving mathematical problems	Faculty-designed math test of problems for computation. Sample test attached.	Target results: 85% Actual results: 65% Proficient students will achieve a score of 80	Use classroom incentives to promote use of math tutoring. Offer additional help through graduate assistant and group work in class w/strong students	Yes, student performance improved during the next semester to a proficiency rate of 75%. Efforts will continue and new strategies will be applied to reach the target.

Note: The Evidence, Target and Actual Results, Use of Results, and Did it Work columns contain hypothetical examples.

Calendar of Assessment Cycle or Sustainability Map

It is useful to create a calendar of assessment cycle (sometimes called a sustainability map) to document a scheduled plan to evaluate student achievement of Program Learning Outcomes (PLOs). This is a matrix or table that lists the courses that will be used to measure certain PLOs and indicates which types of measurement instruments (tests, assignments, or performance tasks)

will be used. In addition, it identifies the semester or year in which each PLO will be measured. For instance, a certain required upper-level course (that was chosen to provide evidence for a PLO) may only occur in the fall semester. The sustainability map would indicate that the PLO will be measured every fall semester. This is called *staggered assessment*, in which a learning outcome is evaluated every other semester. There may be another course used for program assessment that occurs every semester. The sustainability map could show that this PLO will be measured every semester.

Example: Calendar of Assessment Cycle for Program Assessment

Mass Communication Program Learning Outcome	Course and Measurement Instrument	Fall 2013	Spring 2014	Fall 2014	Spring 2015
Illustrate ability to write effectively for basic media outlets	COMM 330: Writing for Mass Media Writing Assignment		X		X
Evaluate effects of media industry on society through presentations and written reports	COMM 370: Communication Practicum Reflective Paper		X		X
Illustrate learned technical and media skills by developing and presenting technical products	COMM 360: Video Production I Video Presentation	X		X	
Design a communication research project	COMM 490: Mass Communication Theory and Research Research Paper		X		X

Note: The pairing of specific courses and assignments from the Department of Communication is a hypothetical example.

Responsible Parties

Everyone is responsible for assessment to facilitate continuous improvement. Even students should diligently check their progress (grade point average, courses taken, performance in class, etc.) toward their goals. Faculty and Administration set goals that are consistent with the University mission, FSU Strategic Plan, and curriculum, monitor progress toward those goals, and adjust strategies based upon data.

Faculty

Program faculty will collaborate to determine the Program Learning Outcomes (PLOs) and appropriate measurement instruments to verify student achievement. They will decide which upper-level (300 – 400 level) required courses should be used to provide evidence of student learning. In other words, they will choose courses in which embedded assignments, tests, or performance tasks should be placed to measure the progress of their majors toward attainment of Program Learning Outcomes. Faculty members teaching the selected courses will report their findings on the CAS program assessment form (available on the CAS Assessment Web site). Faculty members will only be responsible for filling out the portion of the form that pertains to the course that they teach (if that course was selected to provide evidence). The form will be submitted to their Assistant Department Chair or the person designated by the Department Chair to work with assessment.

Program Coordinators

Program Coordinators should lead the discussion among program faculty to select or revise Program Learning Outcomes (PLOs) as necessary. Assist faculty members in choosing measurement instruments and upper-level required courses to use in verifying student learning. Participating faculty members must complete the CAS program assessment form (only the section that pertains to the course they are teaching, if that course was selected). Program Coordinators should check to ensure that the CAS program assessment forms are turned in to the Assistant Department Chair or the person designated by the Department Chair to work with assessment.

Assistant Department Chairperson or Department Assessment Coordinator

Assistant Department Chairpersons are assigned to coordinate assessment efforts within the department. If a department does not have an Assistant Department Chair, a faculty member will be designated by the Department Chair to serve as the Assessment Coordinator for the department. This person will monitor the assessment efforts of the programs, collecting and compiling CAS program assessment forms and data necessary for the Operational Plan and

Assessment Report (OPAR). Information for program assessment will be compiled into one report (Department Summary Program Assessment form, available on the CAS Assessment Web site). The form should be submitted to the CAS Assessment Coordinator and the Department Chair, for inclusion in the OPAR.

The Assistant Department Chair or Department Assessment Coordinator may be asked to help upload departmental assessment data to an online data management system (TaskStream) for review by administrators and accreditation evaluators. Assistance with the use of TaskStream is available online at the CAS Assessment Web site or through the CAS Assessment Coordinator.

Department Chair

The Department Chair is responsible for the Operational Plan and Assessment Report (OPAR), which shares the unit's progress toward its stated goals each semester. The first goal on the OPAR refers to verification of achievement of Student Learning Outcomes (SLOs). This can be documented by attaching the CAS program assessment form, which should be compiled and submitted by the Assistant Department Chair or the person designated by the Department Chair to coordinate assessment efforts. The OPAR must be entered into an online data management system (TaskStream) for review by administrators and accreditation evaluators. The OPAR is one of the data points that Department Chairs must report as a part of the department's Continuous Improvement Report (CIR), which is submitted directly to the Dean of the College of Arts and Sciences.

CAS Assessment Coordinator

The CAS Assessment Coordinator is responsible for the assessment efforts of the Departments and academic programs within the College of Arts and Sciences. This individual will disseminate information regarding assessment rationales and procedures, conduct workshops, make resources available online, and assist faculty and administrators to facilitate continuous improvement through evidence-based decisions.

The CAS Assessment Coordinator functions as the Chair of the CAS Assessment Committee, comprised of Assistant Department Chairs and/or faculty members designated by Department Chairs to manage their assessment efforts. The CAS Assessment Coordinator will collect program assessment forms from the CAS Assessment Committee members and review each department's Operational Plan and Assessment Report (OPAR). This individual reports directly to the Dean of the College of Arts and Sciences, as well as the Associate Vice Chancellor of Academic Affairs and SACS Liaison.

Dean of College of Arts and Sciences

The Dean of the College of Arts and Sciences monitors the assessment efforts of the departments and academic programs. The CAS Assessment Coordinator and Department Chairs report directly to the Dean regarding all measures and progress toward continuous improvement. The Dean will report on the College's activities in support of the FSU Strategic Plan in a College-Level Operational Plan and Assessment Report (OPAR), uploaded on TaskStream. The Dean reports this information to the Associate Vice Chancellor for Academic Affairs and the Provost and Vice Chancellor for Academic Affairs.

Associate Vice Chancellor for Academic Affairs

The Associate Vice Chancellor for Academic Affairs coordinates and monitors the assessment efforts of the University, presiding as Chair of a Committee of Assessment Coordinators representing each School or College. It is the responsibility of this person to review the Operational Plans and Assessment Reports (OPARs), program assessment, and Continuous Improvement Reports (CIRs) of academic units, departments, Colleges, and Schools. This individual also serves as the SACS Liaison, clarifying and reporting assessment information between the accrediting organization and the University. Assessment information will be reported to the Provost and Vice Chancellor for Academic Affairs.

Provost and Vice Chancellor for Academic Affairs

The Provost and Vice Chancellor for Academic Affairs is responsible for the academic programs within the University, including assessment efforts. This individual provides guidance and manages assessment planning and use of data to make evidence-based decisions in the best interests of the University mission. The Provost reports directly to the Chancellor.

Chapter V: Teacher Education Programs

Several academic programs within the College of Arts and Sciences are designed for teacher preparation. Students who gain proficiency in a particular discipline (Art, Music, Mathematics, Language Arts, etc.) can pursue Education courses and student teaching to learn to share their expertise with K-12 students.

NC Professional Teaching Standards

The North Carolina Department of Public Instruction (NCDPI), the organization that confers teaching licensure in the state, maintains high expectations through the NC Professional Teaching Standards (NC Professional Teaching Standards Commission, 2008). Candidates for graduation in teacher education programs must demonstrate proficiency in five areas of pedagogical practice:

1. Teachers lead in their classrooms.
 - a. Teachers demonstrate leadership in the school.
 - b. Teachers lead the teaching profession.
 - c. Teachers advocate for schools and students.
 - d. Teachers demonstrate high ethical standards.
2. Teachers establish a respectful environment for a diverse population of students
 - a. Teachers provide an environment in which each child has a positive, nurturing relationship with caring adults.
 - b. Teachers embrace diversity in the school community and in the world.
 - c. Teachers treat students as individuals.
 - d. Teachers adapt their teaching for the benefit of students with special needs.
 - e. Teachers work collaboratively with the families and significant adults in the lives of their students.
3. Teachers know the content they teach
 - a. Teachers align their instruction with the *North Carolina Standard Course of Study* (state curriculum for K-12 education).
 - b. Teachers know the content appropriate to their teaching specialty.
 - c. Teachers recognize the interconnectedness of content area/disciplines.
 - d. Teachers make instruction relevant to students.
4. Teachers facilitate learning for their students
 - a. Teachers know the ways in which learning takes place, and they know the appropriate levels of intellectual, physical, social, and emotional development of their students.
 - b. Teachers plan instruction appropriate for their students.
 - c. Teachers use a variety of instructional methods.

- d. Teachers integrate and utilize technology in their instruction.
 - e. Teachers help students develop critical-thinking and problem-solving skills.
 - f. Teachers help students work in teams and develop leadership qualities.
 - g. Teachers communicate effectively.
 - h. Teachers use a variety of methods to assess what each student has learned.
5. Teachers reflect on their practice.
 - a. Teachers analyze student learning.
 - b. Teachers link professional growth to their professional goals.
 - c. Teachers function effectively in a complex, dynamic environment.

The teacher education programs must demonstrate student achievement of learning outcomes through the use of *Evidences*, specific projects or assignments designed to encompass the NC Professional Teaching Standards. They are administered in the teaching methods courses within each discipline and/or the student teaching practicum. The evidences, required by NCDPI, provide documentation of students' abilities in each standard:

- Content Project – Project or assignment requiring an in-depth demonstration of candidates' proficiency in their discipline
- Leadership and Collaboration Project – Candidates must provide evidence during their student teaching experience regarding professional development, collaboration with K-12 teachers, participation in school activities, etc.
- Unit Plan – Instructional plan encompassing at least 10 lesson plans in a related or thematic unit. The plan must demonstrate consistency with the NC Professional Teaching Standards, including: interdisciplinary connections, differentiated instruction, modifications for students with special needs, use of technology, use of lesson objectives from the *NC Standard Course of Study*, etc.
- Case Study – Candidates must plan and implement a research project in which they apply an instructional strategy and evaluate its results. This is used to demonstrate the candidates' ability to plan instruction that leads to improvements in student learning.

Common Core State Standards and Essential Standards

The State of North Carolina, along with numerous others, has adopted Common Core State Standards for English Language Arts and Literacy in History/Social Studies, Science, and Technical Subjects. In addition, the NC Essential Standards have been adopted, representing revisions of the curriculum in accordance with New Bloom's Taxonomy. The Essential Standards were written with the help of Dr. Lorin Anderson, one of the authors of New Bloom's Taxonomy (NC Department of Public Instruction, 2012). The K-12 curricula impacted by the new standards include: Science, Social Studies, Information and Technology, World Languages, Arts Education, Occupational Course of Study, Healthful Living, and Guidance. Fayetteville

State University faculty involved in teacher education programs should ensure that candidates' instructional plans are consistent with the Common Core and the NC Essential Standards.

Chapter VI: Operational Plan and Assessment Report (OPAR)

Operational Plan and Assessment Report (OPAR)

The Operational Plan and Assessment Report (OPAR) provides documentation from Colleges, Schools, departments, and other units regarding their progress toward their stated goals, which support the University mission and FSU Strategic Plan. Within the College of Arts and Sciences, the report will be uploaded by Department Chairs and the Dean to an online data management system (TaskStream). The OPAR has six areas that report on the activities of the unit: Mission Statement, Key Positions, Unit Goals / Outcomes / Measures, Mapping, Strategies, and Assessment Plan / Findings and Use of Results. A rubric used by Administration to measure the effectiveness of the OPAR is provided in the Appendix.

Mission Statement

The mission statement of the unit must be aligned with the mission of the School, College, and University. It is clearly related to the outcomes and goals of the unit, providing direction, scope, and the means to achieve academic excellence. It should be reviewed or revised every two years to ensure that the statement remains consistent with evolving goals. It should include the aspirations or vision of the unit.

An outstanding mission statement will include all of the aforementioned traits, show potential to move the unit forward, make a substantial contribution to the implementation of the FSU Strategic Plan, and serve as an exemplar for peers.

Key Positions

This section will document all of the key positions within the unit, listing all faculty and staff members, including their status, education, responsibilities, service agenda, number of advisees or direct report, and courses taught, as applicable. It is imperative that the positions listed are consistent with other lists available elsewhere (such as the FSU Catalog online). The key positions should document Student Credit Hours (SCHs) and Full Time Equivalent (FTE) positions generated by faculty.

An exemplary model of the Key Positions section will include all of the aforementioned traits, show potential to move the unit forward, make a substantial contribution to the implementation of the FSU Strategic Plan, and serve as an exemplar for peers.

Student Credit Hours

Student Credit Hours (SCHs) are used to calculate the amount of Full Time Equivalent (FTE) positions that are generated by faculty. The formula used by the UNC funding model counts SCHs based upon academic disciplines, status as undergraduate or graduate courses, and the credit hours assigned to courses. Academic disciplines are divided into four categories of instruction, designating different numbers of SCHs for each area.

The UNC funding model requires the use of Student Credit Hours (SCHs) to calculate Full Time Equivalent (FTE) positions generated by faculty. Given the necessity to report these numbers within the Key Positions sections of the Operational Plan and Assessment Report (OPAR), the funding model will be briefly addressed here.

The UNC enrollment funding model is based on research from the University of Delaware regarding the cost of instruction (University of Delaware, 2012). Formulas are applied to calculate the number of Student Credit Hours (SCHs) generated by faculty members, based upon their academic disciplines, status as undergraduate or graduate courses, and the credit hours assigned to courses. These numbers are translated into faculty positions, which generate state appropriations. Funding from student tuition for faculty positions largely determines the amount that is generated for academic support, University services, and the library.

UNC Enrollment Funding Model: SCHs per Instructional Position

Instructional Area	Undergraduate	Masters	Doctoral
I Communications; Journalism; English; Mathematics; Philosophy; Psychology; Criminal Justice; Social Sciences; History	708.64 Approx. 118 students per semester (3 credit courses)	169.52 Approx. 28 students (3 credit courses)	115.56 Approx. 19 students (3 credit courses)
II Cultural & Gender Studies; Education; Foreign Languages, Literatures & Linguistics; Family & Consumer Sciences; Liberal Arts & Sciences, Humanities; Multi/Interdisciplinary Studies; Parks, Recreation, Leisure & Fitness; Business, Management & Marketing	535.74 Approx. 89 students per semester (3 credit courses)	303.93 Approx. 50 students per semester (3 credit courses)	110.16 Approx. 18 students per semester (3 credit courses)
III Agriculture; Natural Resources & Conservation; Architecture; Computer & Information Sciences; Engineering-related Technologies; Library Science; Biological Sciences; Physical Sciences; Public Administration & Services; Visual & Performing Arts; Health Professions	406.24 Approx. 68 students per semester (3 credit courses)	186.23 Approx. 31 students per semester (3 credit courses)	109.86 Approx. 18 students per semester (3 credit courses)
IV Engineering; Nursing	232.25 Approx. 39 students per semester (3 credit courses)	90.17 Approx. 15 students per semester (3 credit courses)	80.91 Approx. 13 students per semester (3 credit courses)

Source: University of North Carolina (2009). *Semester Credit Hour Enrollment Change Funding Model User Manual*. University of North Carolina. Chapel Hill, NC.

Note: The last three columns contain an approximation of the total number of students an instructor would have to teach each semester (in 3 credit courses) in order to generate a Full Time Equivalent (FTE) position.

Calculation of Student Credit Hours and Full Time Equivalent Positions

The method of calculating Student Credit Hours (SCHs) and Full Time Equivalent (FTE) positions is described below.

How to Calculate the Number of Students Needed in Courses:

1. Find the Instructional Area (I, II, III, or IV) for your discipline. Locate the column for Undergraduate, Graduate, or Doctoral programs. Note the number of SCHs needed to fund a faculty position in that area.
2. Divide the number by two (the number of semesters in an academic year).
3. Divide the answer by three (the number of credit hours in a 3-credit course). If your classes have a different number of credit hours, divide by that number.

Example:

1. SCHs needed to fund a faculty position in Foreign Languages: 535.74
2. $535.74 / 2$ (fall and spring semester) = 267.87
3. $267.87 / 3$ (credit hours) = 89.29
4. A faculty member in Foreign Languages would need to teach 89 students in 3-credit hour courses each semester to fund a full faculty position.

If each faculty member teaches a full course load (based on their position and course releases), they will receive SCHs approximating 1 FTE per semester (assuming that there are enough students enrolled). The FTE scores for fall and spring are then averaged together (instead of added) to produce a yearly total of 1 FTE.

Example:

Faculty Member	SCH Load Fall	SCH Load Spring	FTE Total For Year
Jane Doe	0.9537	1.1503	1.052

How to Determine the Necessary FTEs for Your Department

Use the following steps to determine the Full Time Equivalent (FTE), the SCH Load necessary to fund a full faculty position for each teacher. Note each teacher's status as full-time, part-time, and use of course releases.

- Full-time teachers need to generate 1 FTE
 - Part-time teachers need to generate 0.5 FTEs
 - One course release generates 0.75 FTEs
 - Two course releases generate 0.5 FTEs
 - Three course releases generate 0.25 FTEs
1. Add the FTEs for all faculty in the program or department. This gives you the number of FTEs needed to fund your faculty positions.
 2. Use the SCH Calculator devised by Dr. Albert Chan (Fayetteville State University, Department of Mathematics and Computer Science). A link to the SCH Calculator is available online at the CAS Assessment Web Site.
 3. Using the SCH Calculator, choose a semester and look up the SCH Load for each faculty member.
 4. Add the total number of SCH Loads for each faculty member. This number shows how many SCHs the person generated this semester.
 5. Divide the total SCH Load by the total FTEs needed (SCH/FTE). This will give you a score that shows how many FTEs (full-time faculty positions) were generated by your department.

Example: A department with 12 faculty members generates a total SCH Load of 10.27. It needs 10 FTEs to fund these positions. Divide the total SCH Load (10.27) by the total FTEs (12) to get an FTE score of 0.855. Ideally, the FTE score will be at least 1.0, to ensure that all faculty positions are adequately funded.

Unit Goals and Outcomes

Departments establish a set of goals that are consistent with the University mission, FSU Strategic Plan, and their individual objectives. The University requires that the first goal in the Operational Plan and Assessment Report (OPAR) must pertain to Student Learning Outcomes (SLOs). This can be documented by attaching the completed CAS program assessment form representing student achievement of Program Learning Outcomes (PLOs). The second goal should address retention and graduation efforts. Additional goals are set by the departments and reported in the *Unit Goals and Outcomes* section of the OPAR.

The goals must be aligned with the unit’s mission statement, mention key strategies, and contain evidence of goals and outcomes. What is the difference between goals and outcomes?

- Goals are broad, “big picture” ideas that represent a desired end or destination.
- Outcomes are more specific actions that are indicators of progress toward the goal.

For instance, if your goal was to travel to California, your outcomes may include planning the trip, making reservations, obtaining transportation, tracking progress through different states, etc.

The goals and outcomes should be explained in clear and measurable terms. Try to avoid vague and lofty statements such as “inspiring commitment to lifelong learning.” This is a worthwhile idea, but it would be difficult to measure (verify) following graduation. (Would we follow a group of graduates in a longitudinal study over years to verify “lifelong learning”)? The Unit Goals and Outcomes must also include an acceptable target and a timeline for implementation.

Model examples of the Unit Goals and Outcomes will include all of the aforementioned traits, show potential to move the unit forward, make a substantial contribution to the implementation of the FSU Strategic Plan, and serve as an exemplar for peers.

Mapping

Mapping refers to the process of aligning unit goals to specific objectives identified by other organizations (Southern Association of Colleges and Schools Institutional Effectiveness standard, FSU Strategic Plan, FSU Priorities, Professional or National Organizations, accrediting associations, etc.). The process of mapping goals to a database of organizations can be facilitated through the use of an online data management system (TaskStream), which can perform the task automatically.

The Operational Plan and Assessment Report (OPAR) requires that the unit goals are mapped to the FSU Strategic Plan and the SACS Institutional Effectiveness standard. In addition, they should be mapped to professional organizations.

Superior examples of mapping will include all of the aforementioned traits, show potential to move the unit forward, make a substantial contribution to the implementation of the FSU Strategic Plan, and serve as an exemplar for peers.

Strategies

The strategies clearly explain the actions that will be implemented to achieve the unit’s goals and outcomes. It is important that the strategies are aligned to the goals or data. For instance, if

detailed strategies are offered that have no relation to the stated goal, or the data collected doesn't match the strategy, the information has little value.

Strategies must be aligned to data and findings. It should be possible to map (connect) each strategy with findings stated in the Assessment Plan / Findings and Use of Results section of the OPAR. The Assessment Plan is useful for determining strategies for improvement. Documentation should be provided (attached to OPAR) that verifies that improvement has or has not occurred. Recommendations for improvement in services or performance should be included.

An excellent example of strategies will include all of the aforementioned traits, show potential to move the unit forward, make a substantial contribution to the implementation of the FSU Strategic Plan, and serve as an exemplar for peers.

Assessment Plan / Findings and Use of Results

The Assessment Plan / Findings and Use of Results is the most important section because it "closes the loop," demonstrating the manner in which the unit uses data to make evidence-based decisions to improve services or performance. The findings must be aligned with measures used to assess outcomes. For instance, a measure that tests mathematical computation would not be aligned with goals to improve critical thinking and analysis. However, the Collegiate Learning Assessment (CLA) would be an appropriate measurement for this goal.

The targets for performance on each measure should be identified to verify whether improvement has occurred. Suggestions for improvement must be aligned with the findings. It is important that the findings are based on assessments that are reliable, effective, and efficient. Evidence of consistency should be included in the assessment plan (see the section of the CAS Assessment Handbook discussing Validity and Reliability, under Measurement Instruments).

Exemplary reports of the Assessment Plan / Findings and Use of Results will include all of the aforementioned traits, show potential to move the unit forward, make a substantial contribution to the implementation of the FSU Strategic Plan, and serve as an exemplar for peers.

Chapter VII: Continuous Improvement Report (CIR)

Purpose

The Department Continuous Improvement Report (CIR) merges the Departmental Metric Report of Spring 2011 and the former Department Report Cards from January 2012. The instrument is intended to monitor and promote continuous improvement that is based on effective assessment and use of results for increased performance. The process of measuring efforts at continuous improvement is a requirement of compliance with the Southern Association of Colleges and Schools (SACS) standards 3.3.2.1 – 5. More importantly, it represents the commitment of Fayetteville State University to the principle of continuous improvement.

Quantitative Measures

The metrics of the Continuous Improvement Report (CIR) are aligned with each component of SACS standards for Institutional Effectiveness (3.3.1.1 – 5). The assessment will include four quantitative measures:

- Retention Rate (Source: Retention Data Dashboard) – Percent of majors enrolled in fall semester who did not graduate, but did re-enroll in the next fall semester. (SACS 3.3.1.2)
- Teaching Evaluations – Use the departmental average on item #40 on the evaluations: “Rate the quality of this course as it contributed to your learning. (Try to set aside your feelings about the course content.)” (SACS 3.3.1.1)
- Advisement – from Advisement Survey – percent of students who agree or strongly agree that they are satisfied with quality of advisement (SACS 3.3.1.3)
- Student Credit Hours / Full Time Equivalent (SCH/FTE) positions generated by faculty (SACS 3.3.1)

Qualitative Measures

The Continuous Improvement Report (CIR) includes four qualitative measures that are in accordance with SACS standards:

- Operational Plan and Assessment Report (OPAR) – An assessment for quality and effectiveness. (SACS 3.3.1)
- Research/Creative Works – include in OPAR a 250 word summary with documentation from the Office of Sponsored Research and Programs (OSRP) and Digital Measures (SACS 3.3.1.4)
- Community Service – Include in the OPAR a 250 word summary with documentation from Digital Measures (SACS 3.3.1.5)
- Student Learning Outcome (SLO) assessment (SACS 3.3.1.1)

Innovation

The section regarding innovation allows departments to earn additional points documented actions that show forward-thinking and creative strategies, processes, services, or products that can benefit students, faculty, the community, and/or the University. It provides departments the chance to gain “extra credit” on the Continuous Improvement Report (CIR) for new and effective ideas.

Procedure

Quantitative measures on the Continuous Improvement Report (Retention and Graduation Rate, Teaching Evaluations, Advisement, and Student Credit Hours) are structured requirements with established standards. The Operational Plan and Assessment Report (OPAR) and Student Learning Outcome assessment contained within the qualitative section will be measured using rubrics (see Attachments). Evaluation of other qualitative measures (Research/Creative Works and Community Service) will be determined based on the criteria set by each department.

It may be useful to include expectations that are required for tenure and promotion as part of the Continuous Improvement Report (CIR). In this manner, the CIR can benefit faculty and administrators by verifying that they are steadily moving toward their goals for tenure and promotion. Conversely, their documented professional activities can serve as evidence that the department is dedicated to continuous improvement.

Department faculty and administrators will collaborate to determine the criteria that constitute professional standards in Research and/or Creative Works. For instance:

- Which types of professional writing rate the highest for your discipline? How would you rate article submissions to local papers, local journals, national journals, or international journals? What constitutes a professional publication? Does it have to be affiliated with a reputable national or international organization? How much does each count toward sufficient professional growth?
- Which types of venues or juries for creative works are considered as professional quality? How would you rate a display of artwork in a local gallery as opposed to a juried competition? How would you rate a performance in a local church or theatre as opposed to a professional venue? How much does each count toward sufficient professional growth?
- It may be useful to design a rubric to apply in evaluation efforts.

Departments must draft a 250-word description of the criteria they choose to define their expectations for professional growth as evidenced by research and/or creative works. This will accompany documentation from the Office of Sponsored Research and Programs (OSRP) and Digital Measures regarding the research and/or creative work of faculty members.

Department faculty and administrators will collaborate to set the criteria defining professional standards for Community Service. For instance:

- Which types of activities will be accepted as community service?
- Will there be ratings associated with specific types or activities or organizations served?
- Development of a rubric may be helpful in rating acts of community service.

Departments must draft a 250-word description of the criteria they choose to describe their expectations for community service. Documentation of activities must be provided from Digital Measures.

Department faculty and administrators will collaborate to determine criteria used to evaluate innovation. This may include:

- What types of activities constitute innovation (new instructional strategies, inventions, processes, methods, services, computer programs, etc.)?
- How will each type of activity be rated? Are they rated based on difficulty? Are they rated based on their impact on student learning? Are they rated based on their benefits to the programs or departments?
- Development of a rubric may be useful. The language may allow enough latitude for numerous types of innovative ideas, while grouping them into categories that can be rated.

Responsible Parties

The Department Chairs will be responsible for compiling and reporting the data necessary for the Continuous Improvement Report (CIR). They may be assisted by the Assistant Department Chair or faculty member designated to serve as the Department Assessment Coordinator. The CIR will include the Operational Plan and Assessment Report (OPAR) as one indicator of performance among other quantitative and qualitative measures. The Department Chair will submit the CIR to the Dean of the College of Arts and Sciences. The report will be turned in to the Provost and Vice Chancellor for Academic Affairs.

Sample Continuous Improvement Report (CIR)

Sample Dept.	Year 1	Year 2	Possible Improvement ¹	Actual Improvement ²	Actual/Possible Improvement ³	Max Relative Improvement All Depts. ⁴	Improvement Points ⁵
1. OPAR	3	5	2.0	2.00	100.0%	100%	5.00
2. Ratio SCH/FTE Faculty	72.0%	74.0%	28.0%	0.02	7.14%	20%	1.79
3. SLO Assessment	3.5	5	1.5	1.50	100.0%	100%	5.00
4. Teaching Evaluation	4.10	4.30	0.90	0.20	22.2%	25.0%	4.44
5. Retention Rate	77.0%	80.0%	23.0%	0.03	13.0%	25.0%	2.61
6. Advisement Evaluation	78.0%	83.0%	22.0%	0.05	22.7%	25.0%	4.55
7. Research / Creative Activities	3	4	2.0	1.00	50.0%	100%	2.50

Table is continued on next page.

¹ "Possible Improvement" (PI) is the difference between the highest possible score for an item and actual score. If the highest possible score is 5 and the actual score is 4, then the possible improvement is 1.

² "Actual Improvement" is the difference between the baseline score and the new one.

³ "Actual / Possible Improvement" measures the amount of possible improvement that was actually achieved from one year to the next. A department with perfect scores for two consecutive years will receive a score of 5. A negative change will NOT have a negative impact on the CIR points.

⁴ Improvement relative to the Max – compares departmental improvement to the highest score achieved by any department. This calculation takes into account the fact that some measures have greater possibility of improvement than others.

⁵ CI Points refers to the ratio of the departmental improvement to the highest improvement multiplied by 5; 5 is used as a multiplier to transform all metrics to a 5-point scale.

Sample Dept.	Year 1	Year 2	Possible Improvement	Actual Improvement	Actual/Possible Improvement	Max Relative Improvement All Depts.	Improvement Points
8. Community Service	3.5	5	1.5	1.50	100%	100%	5.00
Innovation	0						2
Total							32.88 ⁶
% of Total Points (est. 500)							6.58% ⁷
% of funds (est. \$100,000)							\$6,577

Source: Fayetteville State University Office of Academic Affairs

Summary of Metrics

1. **OPAR** (Operational Plan and Assessment Report) – The departmental OPAR will be evaluated based on the rubric below. (SACS 3.3.1)
2. **Ratio SCH/FTE Faculty:** (Based on SCH Calculator): The ratio of SCH-generated faculty positions, based on UNC funding model, to the actual number of faculty. (SACS 3.3.1)
3. **SLO (Student Learning Outcomes) Assessment** – Departmental assessment plans for student learning outcomes will be evaluated according the Rubric for Assessing the Quality of Academic Program Learning Outcomes. See Appendix. (SACS 3.3.1)
4. **Teaching Evaluation:** (Source: Student Evaluations) – Average rating for all faculty on Student Evaluations question #40, “Rate the quality of this course as it contributed to your learning. (Try to set aside your feelings about the course content.)” (SACS 3.3.1.1)
5. **Retention Rate** (Source: Retention Data Dashboard): Percent of majors enrolled in fall semester who did not graduate, but did re-enroll in the next fall semester. (SACS 3.3.1.2)
6. **Advisement Evaluation:** (Source: Advisement Survey): Percentage of students who either strongly agree or agree that they are satisfied with advisement in the department on the Advisement Survey. (SACS 3.3.1.3)

⁶ The Department’s CIR funding is based on the sum of point for all 8 measures and innovation, if any.

⁷ “Percent of total points for all departments” determines the department’s portion of total CI funds.

7. **Research/Creative Works:** Department develops 250-word description in Assessment Report with appropriate documentation from Digital Measures / Research Administration Management System and Electronic Submission (RAMSeS), or Office of Sponsored Research and Programs (OSRP). Report will be graded based on the following scale.
 - a. 5 = Documented increases in quality and quantity of research/creative works.
 - b. 4 = Productivity consistent with previous years and includes significant accomplishments (Report will explain why the research or creative works are significant.)
 - c. 3 = Productivity remains consistent with previous years.
 - d. 2 = marked decline in productivity.
 - e. 1 = Two consecutive years of little or no productivity in the area of research/creative activities.
 - f. 0 = No report.
8. **Community Service** – Department includes 250-word description in Assessment Report with appropriate documentation from Digital Measures. (SACS 3.3.1.5)
 - a. 5 = Documented increases in quality and quantity of community service.
 - b. 4 = Amount of community service consistent with previous years, but includes significant community service accomplishments (Report will explain why the community service is significant.)
 - c. 3 = Community services remains consistent with previous years.
 - d. 2 = Marked decline in community service activities.
 - e. 1 = Two consecutive years of little or no community service activities.
 - f. 0 = No report.

Innovation – Departments may earn up to 3 bonus points for innovation. The department will submit a 250 word description of the innovation to include an explanation of how it has improved student learning, departmental efficiency, quality of services, or some other aspect of departmental operations. **A good example of innovation is the SCH Calculator, created by Dr. Albert Chan in the Department of Math and Computer Science.**

Source: Office of Academic Affairs

Chapter VIII: Quality Enhancement Plan (QEP)

The Southern Association of Colleges and Schools (SACS), the regional accrediting organization that evaluates Fayetteville State University and other southern institutions, requires the implementation of a Quality Enhancement Plan (QEP) to fulfill standards 2.12 and 3.3.2 (Fayetteville State University SACS Office, 2011). The University must identify a key issue based upon institutional assessment that focuses on learning outcomes and/or the environment supporting student learning and the mission of the institution (SACS 2.12).

Conducting a QEP will demonstrate the ability of FSU to initiate, carry out, and complete a project that includes broad-based involvement of institutional constituencies in its development and implementation. The exercise will further display the ability of the University to identify goals and develop a plan to assess their achievement (SACS 3.3.2).

Purpose

The purpose of the Quality Enhancement Plan (QEP) is implied in the title, Making Evidence-Based Decisions (MEBD), indicating a commitment to improve effective communication skills and critical thinking skills among FSU students (Fayetteville State University SACS Office, 2011).

Implementation

The goal of the Quality Enhancement Plan (QEP) is to improve the communication and critical thinking skills of FSU students, requiring them to make evidence-based decisions. Two objectives will be pursued in support of this goal:

- Assessing student learning at the beginning and the ending of the upper division
- Providing faculty and staff with strategies to develop and assess a type of critical thinking (making evidence-based decisions)

The objectives will be supported by the following strategies:

- Require students to report Rising Junior Scores as part of a major course – This method will collect baseline data for majors.
- Involve groups of faculty and staff in professional development activities to acquire strategies to facilitate and assess critical thinking, specifically evidence-based decision making.
- Require faculty and staff to embed critical thinking performance tasks similar to those used in the Collegiate Learning Assessment (CLA) in upper division or co-curricular

activities. Assessment results will be reported for comparison to baseline data (Fayetteville State University SACS Office, 2011).

The implementation of the assessment plan will document student progress in the achievement of effective communication skills and development of the critical thinking skill of making evidence-based decisions.

Glossary

The definitions that follow represent the implementation of each concept as it relates to assessment efforts within Fayetteville State University's College of Arts and Sciences.

1. Actual Results – the percentage of proficiency or performance goal that was actually achieved (less than, more than, or equal to the target goal)
2. Alignment – in relation to assessment, this term describes the consistency of goals with a standard or criterion; For instance, the goals of a department must be consistent with the University mission statement. Student learning outcomes should be consistent with the goals or mission of the academic program. Academic and institutional goals must be consistent with standards required by the Southern Association of Colleges and Schools (SACS).
3. Artifacts - Data, test results, images, or outcomes from assignments, performance tasks, surveys, or other measurements that offer proof regarding student learning or achievement of goals. The term is often used in reference to projects used as evidence of student learning or achievement in Teacher Education Program. See also Evidence and Evidences for Teacher Education Programs.
4. Assessment – refers to a variety of objective measures to evaluate individual or group performance, demonstrations of skills or dispositions, or progress toward a goal.
 - a. Diagnostic Assessment – initial test (often pre-tests), assignment, or measurement that provides a baseline to determine the current skills or position of an individual or group. The information can be used to design a suitable instructional plan or develop strategies to attain a goal. This is a type of formative assessment.
 - b. Formative Assessment – tests, assignments, or measurements that occur during the course of a project, class, semester, or year. They are used to evaluate progress toward a goal.
 - c. Summative Assessment – final test (often post-tests), exam, project, or measurement that indicates the outcomes of the individual or group. This data is used to evaluate whether the goal was attained.
 - d. Formal Assessment – objective measurements that can often be expressed in statistical terms and displayed as percentiles and standard deviations (may include standardized tests and exams).
 - e. Informal Assessment – measurements that include content and performance tests, including oral presentations, projects, artworks, portfolios, experiments, etc. Given the potential for subjective influences, it is useful to employ rubrics when evaluating this type of instrument.
 - f. Criterion Referenced Assessment – This refers to the purpose for which the evaluation is used; the test or assignment is used to measure the individual or

group's performance or competence in a task, according to specific criteria. For instance, an individual may be tested on the ability to calculate complex mathematical formulas. The student will be evaluated based on his/her proficiency (ability to meet the criteria, or target number of correct answers).

- g. Norm Referenced Assessment – This refers to the purpose for which the evaluation is used; the test or assignment is used to compare the performance of an individual or group against that of other individuals or groups. It can answer the question, “How does this individual compare to the norm?” The results may be expressed as scores and percentiles. For instance, a university may use student outcomes on standardized tests such as the Scholastic Achievement Test (SAT) as one of many factors in the admissions process. Some institutions may favor individuals that scored in the highest percentiles of their class.
5. Baseline – an initial measurement of a position, accomplishment, skill, proficiency rate, etc. This allows further comparison with later results, which can track progress toward a goal.
6. Bloom's Taxonomy – a rank order of thinking skills, on a continuum from simple to complex cognitive processes, developed by educational researcher Benjamin Bloom in 1956. They are: Knowledge, Comprehension, Application, Analysis, Synthesis, and Evaluation.
7. Calendar of Assessment Cycle – a matrix or table displaying on a yearly basis, what Program Learning Outcomes (PLOs) will be assessed, when they will be assessed (which semester or year), and in which course. See also Sustainability Map.
8. Closing the Loop – phrase that describes the process of reporting the manner in which data was used to guide decision-making; If a program decides to update the curricula or change a course, cite the data or results that informed that decision.
9. Continuous Improvement – the perpetual cycle of setting goals, defining and implementing strategies, measuring progress, analyzing data, and adjusting strategies to reach ever higher goals
10. Continuous Improvement Report (CIR) – reports collected each semester that share departmental progress on a variety of indicators. There are four quantitative measures: retention rate, teaching evaluations, advisement, and Student Credit Hours/Full Time Equivalent positions generated. The CIR also includes four qualitative measures: research/creative works, community service, Operational Plan and Assessment Report (OPAR), and student learning outcome (SLO) assessment. There is an additional category for innovation. The CIR is the comprehensive evaluation of departmental efforts at improvement based on a common set of metrics. The OPAR documents movement toward improvement in response to the findings of the CIR.
11. Core Learning Outcomes – knowledge, skills, and/or dispositions that students should be able to demonstrate when they have completed the University College Core Curriculum (including Scientific Literacy, Information Literacy, Quantitative Reasoning, Humanities

and Creative Arts, Critical Thinking, Global Literacy, Ethics and Civic Engagement, Communication Skills, and Transitional Studies).

12. Course Learning Outcomes (CLOs) – also called Course Student Learning Outcomes (CSLOs); knowledge, skills, and/or dispositions that students should be able to demonstrate when they have completed a specific course. They often reference the thinking level (see Bloom’s Taxonomy or New Bloom’s Taxonomy) that students are expected to exhibit. See also Student Learning Outcomes (SLOs) and Program Learning Outcomes (PLOs).
13. Data Management System – an electronic, online program used to collect, display, and manage data for assessment and other purposes.
14. Digital Measures – an online data management system used to store, document, and retrieve evidence of professional activity (research, community service, etc.)
15. Evidence – Data, test results, or outcomes from assignments, performance tasks, surveys, or other measurements that offer proof regarding student learning or achievement of goals. See also Artifacts.
16. Evidences for Teacher Education Programs – Specific data, projects, or assignments used as proof of student learning or achievement (Content Project, Case Study, Unit Plan, Professional Leadership Product, and Professional Knowledge, Skills, and Disposition)
17. FSU Strategic Plan – featuring the theme, “The Future is Calling,” this document details the plan to attain specific institutional goals between 2009 and 2014. Six priorities are listed, including retention and graduation rates, economic transformation, intellectual and cultural center, leaders and global citizens, collaborations and partnerships, and fiscal resourcefulness and sustainability. Assessment of academic programs and non-academic units measures the progress of the University toward the goals of the FSU Strategic Plan.
18. Full Time Equivalent (FTE) – the number of faculty positions generated by student tuition as related to Student Credit Hours (SCHs), according to the UNC funding model.
19. Goals – these are major, long-term, “big picture,” or global outcomes that answer the question, “Why do this (course of study, institutional initiative, etc.)?” When planning to reach goals, several objectives may be determined, serving as checkpoints of progress along the way (Bates, 2000).
20. Mapping – in relation to assessment, this term describes the process of matching an objective to a set of standards. For instance, an objective may be consistent with a standard from the Southern Association of Colleges and Schools (SACS), FSU Strategic Plan, or a professional organization. Example: The objective of creating a matrix that identifies which courses from the Core Curriculum fulfill certain student learning outcomes is consistent with SACS Standard 3.5.1 (College-level General Education Competencies). Certain data management systems such as TaskStream may allow a user to automatically match an objective to existing lists of standards from selected organizations.

21. Matrix – a table that displays a list of objects or concepts (example: courses) against a certain criteria (example: program expectations, schedules, etc.).
22. Measurement Instrument – the assignment, project, test, performance task, or other method used to determine student proficiency. The recorded performance on the task (instrument) will provide the evidence (measurement) of student learning.
23. New Bloom’s Taxonomy – a revision of Bloom’s Taxonomy developed by Lorin Anderson (Bloom’s former student), David Krathwohl (Bloom’s former colleague), Peter Airasian, Kathleen Cruikshank, Richard Mayer, Paul Pintrich, James Raths, and Merlin Wittrock in 2001. The new version contains the following thinking skills: Remembering, Understanding, Applying, Analyzing, Evaluating, and Creating.
24. Objectives – statements that describe a desired result or end; they may or may not specify necessary actions or means to reach them; It should be noted that objectives are “ends,” while student learning outcomes are the “means” to achieve them.
25. Operational Plan and Assessment Report (OPAR) – report given every semester by each academic and administrative department to measure progress toward stated goals. The goals are consistent with the University mission and FSU Strategic Plan. The Dept. Chair (for academic units) is ultimately responsible for the report, which is collected and displayed using a data management system (TaskStream).
26. Program Learning Outcomes (PLOs) – also referred to as Program Student Learning Outcomes (PSLOs); knowledge, skills, and/or dispositions that students should be able to demonstrate when they have completed the academic program (qualified for graduation); they are often stated as a few major goals that students are expected to attain. They often reference the thinking level (see Bloom’s Taxonomy or New Bloom’s Taxonomy) that students are expected to exhibit. See also Student Learning Outcomes (SLOs) and Course Learning Outcomes (CLOs)
27. Qualitative – research or assessment methods that yield non-numerical results; they often include surveys, personality inventories, portfolios, narratives, or other outcomes that are not easily quantified (unless a rubric is used).
28. Quality Enhancement Plan (QEP) – The plan is a project that is required by the Southern Association of Colleges and Schools (SACS), the regional accrediting organization for 11 southern states. The theme of the plan is “Making Evidence-Based Decisions,” involving several initiatives (Writing Across the Curriculum, Reading Across the Curriculum, Chesnutt Library Information Literacy Fellows Program, and the Collegiate Learning Assessment at the University) to improve the use of critical thinking among students.
29. Quantitative – research or assessment methods that yield numerical results; they can be expressed in numerical or statistical terms (percentages, standard deviations, stanines, etc.).
30. Reliability – in relation to assessment, this is the expectation that a test produces similar results each time it is administered (if all other factors are equal). In other words, the test

should not yield vastly different outcomes when administered to students of similar academic characteristics (Kubiszyn & Borich, 2007).

31. Rubrics – guidelines for rating student performance; they offer a list of criteria or expectations for each category of performance. This allows students to adjust their work or performance based on the specific guidelines provided. In addition, it gives the students clarity regarding the reasons why they received a certain grade. Rubrics often contain:
 - a. Categories to be rated
 - b. Ratings – Performance levels for each category (example: excellent, satisfactory, fair, poor)
 - c. Descriptors that define expectations for performance levels in each category
32. Southern Association of Colleges and Schools (SACS) – The SACS Commission on Colleges is the accrediting organization responsible for verifying standards at degree-granting institutions in 11 southern states (North Carolina, South Carolina, Virginia, Tennessee, Kentucky, Georgia, Alabama, Mississippi, Louisiana, Florida, and Texas).
33. Staggered Assessment – Refers to the practice of evaluating Student Learning Outcomes (SLOs) every other semester. This is useful for courses that only occur in the fall semester or those that occur only in the spring semester.
34. Student Credit Hours (SCHs) – the amount of hours generated by the number of students in a course; It is subject to the type of discipline, undergraduate or graduate level, and number of credits for each course (1, 2, 3, etc.). The UNC funding model uses a formula to calculate the number of full time equivalent (FTE) faculty positions that are generated by the tuition collected from the students in each class.
35. Student Learning Outcomes (SLOs) – knowledge, skills, and/or dispositions that students should be able to demonstrate following instruction; these can include Program Learning Outcomes and Course Learning Outcomes. They often reference the thinking level (see Bloom’s Taxonomy or New Bloom’s Taxonomy) that students are expected to exhibit. See also Program Learning Outcomes (PLOs) and Course Learning Outcomes (CLOs).
36. Sustainability Map – a table that displays the plan to measure progress toward certain goals. In the context of program assessment, the sustainability map shares which program learning outcomes will be measured, in which courses, and in which semesters.
37. Target Results – the percentage of proficiency or performance goal that you are attempting to reach
38. Validity – in relation to assessment, this is the requirement that a test or assignment measures what it claims to measure. For instance, a test that is designed to measure student’s ability to calculate parametric equations should have test items that require this skill.

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Appendix I: Student Learning Outcome Rubric

Student Learning Outcomes Rubric

	0 Non-existent to less than four per program	1 Matches: Directly related to applicable outcomes to be measured in Core Curriculum and Major; SLOs consistent with those listed in FSU Catalog	2 Appropriate: Uses at least 2 appropriate direct and/or indirect methods	3 Targeted: Indicates desired level of performance and baseline data on which to judge performance change	4 Useful, Reliable, Effective and Efficient: characterizes the outcome with measurements, based on tested, known methods for accountability and improvement; assessment tools are valid, reliable, and inform decision-making for improvement
Programs					

Appendix II: Rubric for Assessing Operational Plan and Assessment Report (OPAR)

	Mission Statement	Key Positions	Unit Goals/ Outcomes	Mapping	Strategies	Assessment Plan/ Findings & Use of Results
0	Non-existent or incomprehensible	Non-existent or incomprehensible	Non-existent or incomprehensible	Non-existent or incomprehensible	Non-existent or incomprehensible	Non-existent or incomprehensible
1	Very limited entry	Very limited entry	Very limited entry	Very limited entry	Very limited entry	Very limited entry
2	Not specific to the department; Aligned with the mission of the School or College	Key positions are inconsistent with listing(s) elsewhere: FSU Catalog (online) and other listings	Alignment with the mission statement; evidence of goals and outcomes	Mapped to FSU Strategic Plan only	Describes activities, but no alignment to data	Measures and findings are aligned to outcomes. Measure(s) are appropriate to assess outcomes. Targets for measure(s) are identified.
3	Clearly related to the outcomes and goals of the unit; Provides direction, scope, and means to achieve academic excellence	Documents all positions and responsibilities (includes faculty members, status, education, & courses taught)	Outcomes are aligned with the goals; Describe where unit would like to be in a specified time, what outcome is expected	Mapped to FSU Strategic Plan and SACS Institutional Effectiveness	Clearly describes actions that align to outcomes and data; strategies listed and aligned to data/findings	Assessment Plan is useful for determining strategies for improvement. Findings are reflected upon and suggestions for improvement are aligned with the findings

4	Has been reviewed or revised within the past two years to include aspirations/vision	Documents SCHs, FTE, education and number of Advisees	Describes outcomes expected in measurable and clear terms	Mapped to FSU priorities, Professional organizations and SACS Institutional Effectiveness standard	Documentation that improvement has or has not resulted, recommendations for changes to increase improvement in services or performance; Strategies can be mapped to the findings	Findings are based on assessments that are reliable, effective and efficient; evidence of consistency is included in the assessment plan
5	<p>Meets all requirements for standard 4 and has the potential to move the unit forward.</p> <p>Clearly identifies areas of needed improvement.</p> <p>Makes a substantial contribution to the implementation of the Strategic Plan and serves as an exemplar for peers</p>					

Appendix III: Rubric for Assessing the Quality of Academic Program Learning Outcomes

Criterion	Comprehensive List of Program Outcomes	Assessment Measures	Data Presentation, Discussion, and Use for Improvement
1 -Undeveloped	There is no comprehensive list of Program Learning Outcomes	Assessment Measures are not stated.	There is not a clear presentation of data and/or use of data for program/unit improvement.
2 -Initial	The list of outcomes is incomplete, overly detailed, inappropriate, disorganized. Ignores relevant core learning outcomes. Confuses learning processes (e.g., doing an internship) with learning outcomes (e.g., application of theory of real-world problems).	Outcome statements do not identify what students can do to demonstrate learning. Statements such as “Student understands scientific method” do not specify how understanding can be demonstrated and assessed.	Some aspects of the data collection, analysis, interpretation and/or use of data for improvement are present, but weak, e.g., the alignment of the changes with the data or outcomes is unclear.
3 - Emerging	The list includes reasonable outcomes but does not specify expectations for the program as a whole. Relevant institution-wide learning outcomes and/or national disciplinary standards may be ignored. Distinctions between expectations for undergraduate and graduate programs may be unclear.	Most of the outcomes indicate how students can demonstrate their learning. Measurement relies on short-term planning, such as selecting which outcome(s) to assess in the current year	All aspects of the processes are present, but incomplete or unclear in some aspects. It lacks specific baseline data, targets and/or discussion of what improvements will be made.
4 -Developed	The list is a well-organized set of reasonable outcomes that focus on the key knowledge, skills, and values students learn in the program. It includes relevant institution-wide outcomes. Outcomes are appropriate for the level national disciplinary standards are considered.	Each outcome describes how students can demonstrate learning. The measures have a reasonable, multi-year assessment plan that identifies when and how each outcome will be assessed. The plan may explicitly include analysis. There is a clear relationship between the outcomes and the assessment that students	The processes for the interpretation, presentation, and discussion of the data are clear and include who will be involved and timing. Strong uses of data for improvement are described.

		experience.	
5 -Highly Developed	The list is reasonable, appropriate, and comprehensive, with clear distinctions between undergraduate and graduate expectations, if applicable. National disciplinary standards have been considered. Program learning outcomes increase in difficulty based on data.	The processes for the interpretation, presentation, and discussion of the data are clear and include who will be involved and timing. Strong uses of data for improvement are described.	The processes for implementing revisions based on assessment results are clearly described, aligned, and address consistency. Recommendations for change have the potential to move the unit forward.
Score			

Total Score _____ /3 = CIR Score

Source: Office of Academic Affairs

Appendix IV: Course Certification Form

Fayetteville State University

CORE CURRICULUM COURSE CERTIFICATION REQUEST

This form must be accompanied by the current course syllabus.

Course _____ Title _____ Credit Hours _____

Pre- or Co-requisites _____ Number of sections per year ____ Enrollment limit per section ____

1. Primary Core Student Learning Outcome (SLO)

Designate one Primary Core SLO; this is the SLO under which the course will be listed in the Catalog. For a list and description of Core SLOs, see the Core Curriculum page of the Catalog (<http://catalog.uncfsu.edu/ug/UC/UNVC/uncvcore.htm>).

Primary Core SLO: _____

2. Assignment Map

Identify the specific components of the learning outcome that the course will address. *(For example, Global Literacy includes several components: Students will appreciate the global diversity of cultures, values, and belief systems and the common humanity underlying them; interact effectively with culturally different peoples; understand cultural interdependence, and create solutions to intercultural problems).* List assignments and assessments common to all sections that help students learn the primary SLO selected above.

Learning Outcome Component	Assignment(s) / Assessment(s)

3. Narrative

Explain why this course should be included in the University College Core Curriculum under the SLO identified above (250 words maximum). Include any plans to redesign the course to align it with the Core SLO.

SIGNATURES

Signatures indicate initial approval. The responsible department must submit an Assessment Plan within one semester from initial approval; if not, approval is automatically revoked and the course will not be included in the University College Core Curriculum for the following year.

Department Curriculum Committee _____ Date _____

Department Chair _____ Date _____

Core Advisory Committee _____ Date _____

Core Steering Committee _____ Date _____

University College Dean _____ Date _____

College Dean _____ Date _____