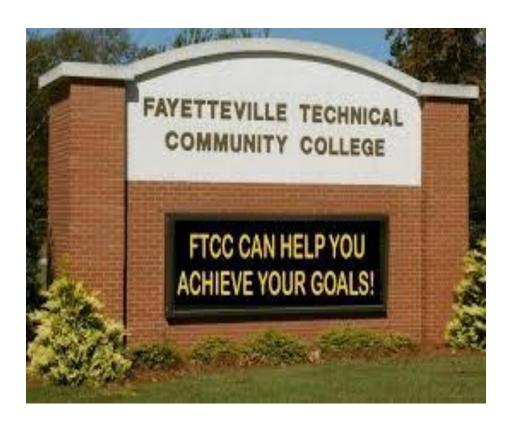
ASSESSMENT AT FAYETTEVILLE TECHNICAL COMMUNITY COLLEGE:

A GUIDE TO WELCOME AND INFORM ASSESSMENT UNIT LEADERS AS THEY EMBARK UPON THEIR ASSESSMENT JOURNEY



Updated February 17, 2022
FTCC Office of Institutional Effectiveness

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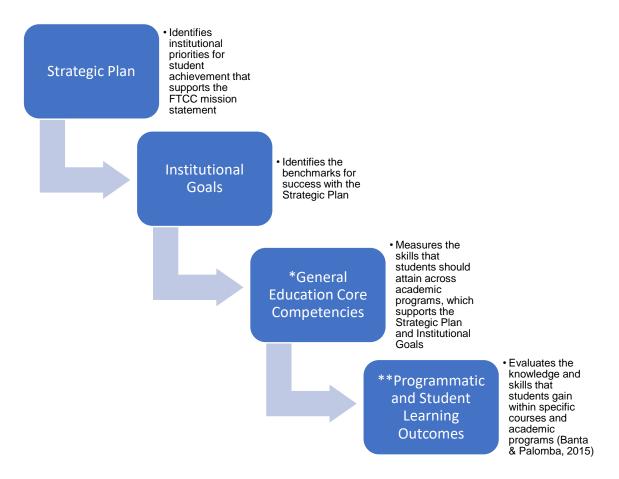
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Foundations of Assessment at Fayetteville Technical Community College (FTCC)

What is assessment? According to Suskie (2009), "assessment is the ongoing process of

- Establishing clear, measurable, expected outcomes of student learning
- Ensuring that students have sufficient opportunities to achieve those outcomes
- Systematically gathering, analyzing, and interpreting evidence to determine how well student learning matches our expectations
- Using the resulting information to understand and improve student learning" (p. 4).

The alignment of institutional goals from the FTCC Strategic Plan with general education core competencies, programmatic and student learning outcomes creates the foundation of academic assessment. Envisioning the structure of assessment resembles the following figure.



^{*}Non-academic units are not required to assess General Education Core Competencies, with the exception of Student Services and Student Learning Center.

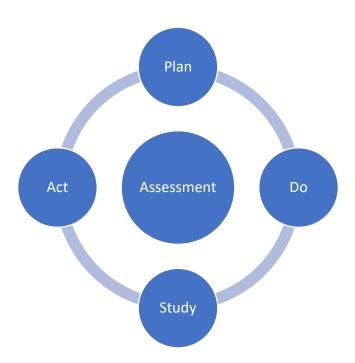
^{**}Non-academic units do not create programmatic or student learning outcomes.

The figure below illustrates the alignment of assessment with institutional planning processes and how FTCC meets the academic, economic and workforce training needs of Cumberland County. Every layer of assessment depends upon continuous input from across the College in support of its <u>mission</u>.

Importance of Assessment at FTCC

Why is assessment important? According to Bresciani (2006), assessment and accountability are synonymous among legislators, regional accreditors, licensing agencies, and prospective students alike. Bresciani (2006) states, "accountability has become a prevalent concept and programmatic initiative" (p. 2). Assessment proves that "we do what we say we will do", shows how FTCC improves student achievement, demonstrates continuous improvement, and describes how the academic and non-academic units help students achieve their educational and career goals. In conjunction, the assessment process further demonstrates the importance of self-reflection. Without a well-defined process, programmatic review, institutional planning, and decision-making impacting student achievement may fail. The following figure illustrates the continuous improvement model of assessment implemented by FTCC.

Assessment: Two-Year Cycle (2021-2023)



FTCC follows a two-year assessment cycle, depicted in the chart listed below, that supports continuous improvement for its academic and support units. Data collected from the first year is analyzed with opportunities identified for improvement based upon self-reflection and internal analysis. The second year allows for the adjustment of any measures and/or key performance indicators (KPIs) that evaluates the following:

- General Education Outcomes
- Academic Program Outcomes
- Non-Academic or Support Outcomes

Assessment Activity	Start Date	End Date
New Assessment Cycle Begins October 15, 2021		
Establish Outcomes, Measures, and Key Performance Indicators (KPIs) (Year One)	October 15, 2021	December 15, 2021
Data Collection (Year One)	December 15, 2021	August 15, 2022
Data Analysis and Action Plans (Year Two)	August 15, 2022	October 15, 2022
Adjust Measures and KPIs based upon Action Plans for each Outcome (Before adjusting your measures and/or KPIs, export the assessment PDF and upload into Docs and Reports) (Year Two)	October 15, 2022	December 15, 2022
Data Collection (Year Two)	December 15, 2022	May 15, 2023
Close the Assessment Loop: Summary Analyses and Action Plan for each Outcome (Year Two)	May 15, 2023	August 15, 2023
Strategic Plan Uploaded into New Assessment Cycle (Year Two)	September 1, 2023	September 15, 2023
New Assessment Cycle Begins October 15, 2023		

During the first year, academic and non-academic units create at least three outcomes based upon alignment with applicable institutional goals and strategies contained within the Strategic Plan and General Education Core Competencies (academic units only). Please refer to Appendix I for assessment terminology used throughout this document. Academic units must create programmatic and course-level outcomes. Measures accompany each outcome by identifying the sources of evidence and methods used

for examination. Evidence-based KPIs are created for each measure that constitutes the threshold for success.

At the beginning of the second year, data gathered during the first-year is studied and action plans are created to support continuous improvement. Measures and/or KPIs are adjusted, based upon collected evidence and action planning, to reflect what was learned during the first year. At the end of the assessment cycle for Year Two, units will study KPIs as part of "closing the assessment loop."

Watermark™ Training

Although not all individuals will engage with final reporting within Watermark™, **ALL FTCC** faculty and staff have a role to play in assessment. Annually, the FTCC community engages in assessment to give stakeholders plan for both academic and non-academic programs. This process is the cornerstone for continuous improvement at the College. Linked below are Watermark™ training videos; each tutorial provides a brief overview of how to enter each component of your assessment.

- Getting Started with Watermark™
- Creating Mission Statement
- Creating Outcomes
- <u>Linking to the Strategic Plan</u>
- Creating Measures
- Creating Key Performance Indicators (AKA Assessment Targets)
- Entering Results
- Analysis of Results and Action Planning
- Adding Supporting Documentation

Year One

Creating Mission Statement

Please state the mission **of <u>your</u>** department or program of study. According to SACSCOC (2020) (Southern Association of Colleges and Schools Commission on Colleges), the accredited institution "(1) has

a mission appropriate to higher education, (2) has resources, programs, and services sufficient to accomplish and sustain that mission, and (3) maintains clearly specified educational objectives that are consistent with its mission and appropriate to the degrees its offers, and that indicate whether it is successful in achieving its stated objectives" (p.3). For all programs and departments, the internal department or program of study mission statement should be distinctive, clarify program/department activities and functions, identify stakeholders, and reflect alignment with the institutional mission and strategic plan (Bresciani, 2006; Suskie, 2009).

Creating Outcomes

Academic programs and non-academic departments must formulate at least three outcomes that are specific, measurable, achievable, realistic, and time-bound (SMART). According to Bresciani (2006), "the institution identifies expected outcomes for its educational programs and its administrative and educational support services; assesses whether it achieves these outcomes; and provides evidence of improvement based on analysis of those results" (p. 60). For academic programs, you should include programmatic and student-level outcomes; each outcome should map to one or more of the institutional goals from the Strategic Plan, associated sub-strategies, and General Education Core Competencies. The outcomes for non-academic departments must map to one or more institutional goals and strategic plan

Learning Outcomes

How do I write learning outcomes? According to Suskie (2009), learning outcomes should be SMART: Specific, Measurable, Attainable, Results-Focused, and Time-Focused. Student learning outcomes state what students are expected to know or be able to do upon completion of a course or program. Course learning outcomes may contribute, or map to, program learning outcomes, and are required in group instruction. At both the course and program level, learning outcomes should be clear, observable and measurable, and reflect what will be included in the course or program requirements (assignments, exams, projects, etc.). Academic units must include course and program-level outcomes. Typically, there are 3-7 course and program learning.

Begin with an action verb that denotes the level of learning expected. Terms such as know, understand, learn, appreciate are generally not specific enough to be measurable. Levels of learning and associated verbs may include the following:

- Remembering and understanding: recall, identify, label, illustrate, summarize.
- Applying and analyzing: use, differentiate, organize, integrate, apply, solve, analyze.
- Evaluating and creating: Monitor, test, judge, produce, revise, compose.

Consult Bloom's Revised Taxonomy (described below) for more details. For additional sample action verbs, refer to Attachment B within the <u>Effective Use of Performance Objectives for Learning and Assessment</u>.

In 1956, Benjamin Bloom and colleagues differentiated six levels of learning in the "cognitive" domain and proposed a list of skills that would indicate understanding at each level. In 2001, Anderson et al. (2001) and colleagues revised the <u>taxonomy</u>. The lowest levels (which are most commonly tested in exams) are based on knowledge of factual information. Understanding at higher levels is indicated by more complex skills in evaluation, synthesis, or the creation of new information.

Next, follow with a statement that describes the knowledge and abilities to be demonstrated in less than 400 characters. Examples are provided below:

- Identify and summarize the important feature of major periods in the history of western culture.
- Apply important chemical concepts and principles to draw conclusions about chemical reactions.
- Demonstrate knowledge about the significance of current research in the field of psychology by writing a research paper.

Non-Academic/Support Outcomes

Non-academic or support units must create between 3 – 7 outcomes. These outcomes are related to service quality, efficiency, compliance, the volume of unit activity, effectiveness, customer satisfaction, and staff development, as examples. Some areas may create learning outcomes, if applicable, such as

Student Services and Student Learning Center. Please remember to begin your outcome with an action verb and follow Bloom's Taxonomy regarding the specific competency being evaluated.

Furthermore, administrative units seek improvement by analyzing data from their assessment of operational, including learning outcomes where applicable, and develop strategies to improve learning, services, and client/customer satisfaction. The success of these action steps helps to inform the refinement or creation of outcomes for the second year of the assessment cycle. The planning and assessment of administrative outcomes involve all the primary functions of the unit and are aligned to the institutional goals, departmental mission, and strategic plan strategies. Non-Academic/Administrative units should consider the following when creating outcomes:

- Lead to improvements in unit responsibilities.
- Focus on critical functions, services, and processes that impact the unit and support the mission.
- Are defined as statements that describe the desired quality (e.g., timeliness, accuracy, responsiveness) of key functions and services within the administrative unit.
- Rely on verbs that specify definite, observable behaviors and are observable/measurable (refer to Bloom's Taxonomy).
- Define level of satisfaction clients have with services offered.
- Contribute to the development and growth of students.
- Questions that administrative assessment address:
- Is the outcome related to the unit mission?
- Does the outcome lead to improved services?
- Do the results potentially provide data the unit can use to improve services and/or aspects of services that need improvement?
- Is the outcome worded in terms of what the unit will accomplish or clients think, know,
 do following the use of services?
- What and how does an administrative unit contribute to the development and growth of students?

Sources of Evidence

Before you create the associated measure, you will select the source of evidence for the measure from a drop-down box within Watermark™. Sources of evidence fall into two categories: direct measures and indirect measures. According Walvoord and Anderson (2010), examples of direct learning measures are defined as "when the student does something that is directly observed and evaluated by someone else" (p. 155). Indirect measures supplement what stakeholders learn from direct assessment studies, such as alumni surveys, employer surveys, satisfaction surveys, and interviews (Suskie, 2009).

Course-Level Direct Measures

- Test
- Paper
- Project
- Laboratory notebook
- Artistic performance
- Journal
- Homework
- Problem sets
- Reports
- Clinical experience
- Research project
- Case study analysis
- Portfolios*

Course-Level Indirect Measures

- Surveys*
- Job placement*
- Focus groups*

^{*} Also applicable at the program level.

Program or Department-Level Direct Measures

- Capstone projects
- Exhibits
- Performances
- Pass rates
- Licensure scores
- Certification

Program or Department-Level Indirect Measures

- Program review data
- Job placement
- Alumni surveys

Non-Academic Direct Measures

- Participation
- Quantitative Reports on Service Delivery
- Quantitative Reports on Accuracy/Efficiency/Completion
- Financial Reports
- Industry Standards
- Dollars Raised/Dollars Saved

Non-Academic Indirect Measures

- Focus Group Discussions
- Job Satisfaction Surveys
- Client/Student Satisfaction Surveys
- Observations
- Qualitative Data

Rubrics and Test Blueprints

According to Suskie (2009), the source of evidence used in assessment should be planned carefully prior to creation. Test blueprints and rubrics ensure that the assignment aligns with the intended learning outcome. Suskie (2009) suggests creating a test blueprint, which includes "a list of key learning goals to be assessed by the test and the number of points or questions to be devoted to each learning goal" (p. 38). Once the blueprint has been established, then create the assignment. Rubrics, or scoring guides, represent another widely adopted strategy to ensure that the assignment and learning outcome align with one another. Suskie (2009) defines a rubric as "a list of key things you want students to learn by completing the assignment and to demonstrate on the completed assignment" (p. 38). FTCC incorporates the Valid Assessment of Learning in Undergraduate Education (VALUE) rubrics, developed by the American Association of Colleges and Universities (AACU), into assessment of general education core competencies across the institution.

Creating Measures

For each outcome, regardless of academic or non-academic, create a related measure that describes the methods used for evaluation purposes (Bresciani, 2006; Suskie, 2009). First, identify the source of evidence from the drop-down box (e.g., test, survey, portfolio, etc.). For instance, the use of multiple measures allows you to gather different perspectives and gauge effectiveness using direct and indirect assessments. FTCC incorporates multiple measures to assess student achievement at the course, program, and institutional levels. According to the National Academic Advising Association (NCADA), multiple measures "means going beyond a simple satisfaction survey or an individual measure that evaluates (rather than assesses) a single dimension of a single phenomenon" (Campbell et al., 2015, Slide 4). Incorporating direct and indirect learning measures provides "students a variety of ways to demonstrate their learning" (Suskie, 2009, p. 157).

For the purposes of assessment at FTCC, the following template will be used by all:

What (What do you want to accomplish?)

- How (What steps will you take to accomplish the outcome? How will you acquire the learning? How
 will you measure the outcome? Also, this is where you will talk about how you established the target
 for success. In other words, what is your basis for the target?)
- Why (Why is assessing the objective important? What do you hope to improve?):
- When (When will the assessment take place?)
- Who (Who is responsible for the assessment?)

Creating Key Performance Indicators

What is the key performance indicator (KPI) that indicates success for each measure? Before determining the KPI, how are you arriving at the success threshold? Are you relying upon documented evidence, research-based articles, practical experience, etc.? In other words, you should be able to defend how you select the KPI using data. According to Mohiuddin et al. (2020), "KPIs assist teachers in measuring students' performance of course learning, and achieving its objectives" (p. 437). A single methodology for selecting KPIs does not exist. However, trend analyses, benchmarking, literature reviews, programmatic licensing agencies, rubrics are examples of how you can develop KPIs for assessment purposes.

Year Two

Study and Action Planning

As you begin the second year of the assessment cycle, review the assessment process and evidence from Year One. Did you meet the KPIs from the first year? If so, why? If not, why? Action planning offers the opportunity to determine how you intend to achieve your KPIs during Year Two. What do you plan to change? If you met your KPI, how can you build upon your results to analyze other areas of interest? Additional questions to consider include:

- What additional information or evidence is needed to understand how well students are achieving program goals?
- How will you use the information to improve student learning?
- How will you use the information to improve departmental operations?
- How can the program improve learning more effectively in a time of tight or limited resources?

• How can the program or department continue to ensure continuous improvement?

You should enter your respective action plans for each finding by clicking on the <u>Add New Action</u> (you will be prompted to enter your active directory username and password) button located underneath the Analysis section. A dropdown menu of actions will appear that you may or may not use, depending upon the action that you plan to create. Once you select the action, enter the description of your respective action plan, recommended due date, and click Create Action. If you select "Other" as your action, you will need to enter a title when prompted, click Next, then enter your description and due date. Once complete, you should click the Save & Close button located at the top right portion of your screen

Before adjusting your assessment for Year Two, please complete the following steps:

- Ensure that you indicate met or not met for each KPI and summarize your findings.
- Upload supporting documentation for each KPI and source(s) of evidence.
- Create an action plan that addresses the questions, where applicable, at the top of this page before
 proceeding with any adjustments to your assessment.
 - Your responses form the basis for the changes to your assessment plan during the second year.
- Export your current assessment with your supporting documentation from Year One and upload into Docs and Reports (Active Directory Username and Password required) within Watermark™.

Updating Measures and/or KPIs

Once you have completed the steps on pages 12-14, you should adjust the measures and/or KPIs accordingly. However, please ensure that you have exported your assessment and uploaded into the Docs and Reports section before you make any changes.

Findings and Summary

Beginning no later than May 15th of the second year, you should indicate whether you met your KPI for each measure (Met or Not Met). After you indicate whether the target was met or not met, please provide a brief summary of the results within the summary box.

Closing the Assessment Loop and Analyses

Did you action "move the needle?" After you have evaluated your findings, there are several questions to consider as you close the assessment loop. Within the **Analysis** section, please answer the following questions:

- What were the strengths of your assessment process?
- What were the weaknesses of your assessment process?
- What was learned as a result of your assessment process?
- What opportunities were identified from assessment findings for continuous improvement?
- How will the assessment data be used for evidence-based decision-making for continuous improvement?

Documentation

The following supporting documentation, PDF preferably, must be uploaded annually into your assessment within Watermark™:

- Academic Program Reviews (curriculum only)
- Advisory Committee Meeting Minutes (curriculum only)
- Planning Documents (including Year One outcomes, measures, targets)
- Sources of evidence used for each measure
- *Data supporting each KPI

*Detailed evidence that supports your KPI (while you may report data in aggregate, you must upload individual results for each student while maintaining FERPA-Family Education Rights Privacy Act). To maintain FERPA, please ensure that **no student names or identification numbers** are uploaded into the assessment management system. For instance, if you used a rubric, you would upload the rubric used for each student (with the student's name removed) and their respective score using the rubric. If you used a test, then you would upload each student's test score **without the student's name**.

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Appendix I: Assessment Terms and Definitions

The following terms and definitions were adapted from Allen (2003); Banta & Palomba (2015); FTCC Planning Guide (2021); Miller & Leskes (2005); Suskie (2009).

<u>Assessment Artifact</u> – (AKA Lesson Artifacts) – refers to evidence that supports the measure (ex., sources of evidence such as rubrics, tests, surveys; raw data that supports whether the KPI was met or not met).

<u>Assessment Cycle</u> – refers to the two-year assessment timeline that FTCC follows.

Assessment Management System - (commonly referred to as AMS) - database that houses assessment plans, results, and supporting documentation. FTCC uses Watermark™ Planning & Self Study and Student Learning & Licensure modules

Assessment Plan - outlines what empirical data will be collected, by whom, for the assessment each of the learning outcomes (two-year cycle); the process for reviewing the data, policies and procedures to guide discussion and feedback of the results; and the process for modifying the course, program or curriculum to improve student learning.

Benchmark – defined measurement or standard that serves as a point of reference by which process performance is measured.

Bloom's Taxonomy - commonly used description regarding the six levels of learning that occur. Knowledge increases as one progresses through the levels of learning, where knowledge is the most basic level and evaluation represents the highest form of learning.

- Knowledge To know specific facts, terms, concepts, principles or theories.
- Comprehension To be able to understand, interpret, compare, contrast, and explain.
- Application To apply knowledge to new situations, to solve problems
- Analysis To identify the organizational structure of something; to identify parts,
 relationship and organizing principles
- Synthesis To create something, to integrate ideas into a solution, to propose an action plan, to propose a new classification scheme

Evaluation - To judge the quality of something based on its adequacy, value, logic, or use.

<u>Course-Level Assessment</u> -- gathering data on student learning during the educational experience within the course, designed to help the instructor determine which concepts or skills the students are not learning well, so that steps may be taken to improve the students' learning while the course is still in session.

<u>Closing the Loop</u> - assessment results are acted upon and turned back into program improvement.

<u>Curriculum Alignment</u> - curriculum and learning objectives are aligned or matched to ensure that students are provided appropriate learning opportunities in order to achieve the identified learning outcomes.

<u>Curriculum Map</u> – matrix that shows program courses by rows and expected learning outcomes as column headings that illustrates the outcomes covered in each course.

<u>Direct Learning Measure</u> – (AKA Direct Learning Outcome or Direct Measure) - Involves examination of student work or performance, such as embedded test questions, written papers, oral presentations, student projects, or portfolios. Assessment results will be even more convincing if different assessment strategies triangulate to support the same conclusion.

<u>Embedded Assessment</u> - means of gathering information about student learning that is built into and a natural part of the teaching and learning process. Often used for assessment purposes in classroom assignments that are evaluated to assign students a grade. Can assess individual student performance or aggregate the information to provide information about the course or program; can be formative or summative, quantitative or qualitative.

<u>Formative Assessment</u> – completed while student learning is taking place rather than at the end of the course or program.

<u>General Education Core Competencies</u> - graduates of FTCC, regardless of program area, should possess a common core of general education competencies that promote success in the

workplace, facilitate the learning of technical skills, and ease the transition to further higher education.

Achievement of these core competencies should also serve to enhance quality of life. These core competencies include:

- Communicate effectively using the conventions of American Standard English in professional and academic environments.
- Use critical thinking to analyze problems and make logical decisions.
- Demonstrate socialization skills that support cultural awareness and a global perspective.
- Demonstrate quantitative competencies.
- Demonstrate digital and information literacy.

<u>Indirect Learning Measure</u> – (AKA Indirect Learning Outcome or Indirect Measure)
Assessments that supplement what faculty learn from direct assessment studies, such as alumni surveys, employer surveys, satisfaction surveys, and interviews.

<u>Institutional Level Assessment</u> – (AKA College-Wide or General Education Assessment) –

Provides evidence regarding how the institution fulfills its mission via measurement of general education core competencies across curricular programs of study.

<u>Key Performance Indicator (KPI)</u> – (AKA Assessment Targets) – quantitative indicator that demonstrates achievement of the intended learning outcome.

<u>Learning Outcomes</u> (AKA Learning Objectives)- statements that describe specific behaviors a student is expected to demonstrate to assure the stated goal has been achieved; knowledge, skills and values students should demonstrate upon completion of a course, program or curriculum.

<u>Levels of Assessment</u> – The multiple levels where assessment occurs includes:

- Level 1 Assessing individual student learning within courses
- Level 2 Assessing individual student learning across courses
- Level 3 Assessing courses
- Level 4 Assessing programs

Level 5 – Assessing the institution

<u>Measures</u> – description of the plan regarding the assessment process for each outcome (What, Why, How, When, and Who).

<u>Mission</u> - description of the unifying purpose of the goals of the institution, department, or general education curriculum.

<u>Program Outcomes Assessment</u> - an ongoing process designed to monitor and improve student learning. Faculty develop specific statements of what students should learn, verify that the program is designed to foster this learning, collect empirical data that indicate student attainment, and use these data to improve student learning.

<u>Qualitative Assessment</u> – response options analyzed through the identification of recurring patterns and themes. Examples include reflective writing, online course discussion threads, focus groups, observations, and interviews.

<u>Quantitative Assessment</u> – response options that are summarized into numbers and analyzed statistically. Examples include test scores, rubric scores, survey ratings, and performance indicators.

Rubric - set of scoring criteria used to determine the value of a student's performance on assigned tasks.

Source of Evidence – direct or indirect measures utilized for data collection.

<u>Strategic Plan</u> – describes the long-term mission, purpose, measurable goals, and process for measuring improvement by the institution.

<u>Summative Assessment</u> – occurs at the end of a course or program.

<u>Student Learning Outcomes</u> (AKA Student Learning Objectives) - Statements of what students are expected to know and be able to do by the time they complete the major or degree. They may be stated in terms of expected knowledge, skills or attitudes.