THE AMERICAN UNIVERSITY IN CAIRO

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Assessment

A Guide to Developing and Implementing Effective Outcomes Assessment

Why We Assess…

There is a growing demand in higher education for systematic and thoughtful assessment of student learning and overall institutional effectiveness. Increasingly, institutions of higher education are being called upon to demonstrate that fiscal and human resources are being invested in ways that result in quality outcomes and that these outcomes are enabling the institution to achieve its mission.

Externally, the university is required by our accrediting agency, the Middle States Commission on Higher Education, as well as discipline-specific accrediting bodies like AACSB, ABET, ACEJMC, CSAB, and others, to develop and implement plans for assessing student learning as well as the effectiveness of its administrative operations. In addition, AUC recognizes the need for accountability to all of its stakeholders: students, faculty, staff, trustees, parents, governmental agencies, alumni, employers, as well as the local community and the region. Assessment data provides evidence to all of these groups that AUC is actively monitoring its progress towards its goals.

What exactly is assessment? Assessment is a process of defining a program or unit's mission, developing desired outcomes, continuously monitoring progress towards those outcomes, communicating results, and using those results to make improvements. Assessment is an outstanding tool for faculty and administrators: at its best, it communicates expectations, provides feedback, engages students and staff in achieving desired results, and provides useful information to help improve learning and guide decision making and resource allocation.

The university is strengthening its efforts to institutionalize an assessment environment that encourages open reflection, supports innovation and experimentation in assessment methods, and promotes a culture of evidence in decision-making. All departments or units across campus are expected to develop and implement effective assessment plans and to report assessment results on an annual basis to their area heads. IPART will coordinate assessment activities across campus; provide resources including advice, training, and workshops; disseminate assessment information and best practices; and offer timely feedback on unit plans and reports.

Our hope is that this guide will serve as a useful tool to help you develop assessment plans that will be simple, workable, and provide meaningful information to guide your decision-making and improve student learning. We hope that you'll share your plans, results, assessment tools, best practices, and success stories with your colleagues to build a knowledge base that will support assessment efforts across campus. And, finally, we hope that you'll contact us and let us know how we can help you in developing a strong and vibrant assessment culture within your program.

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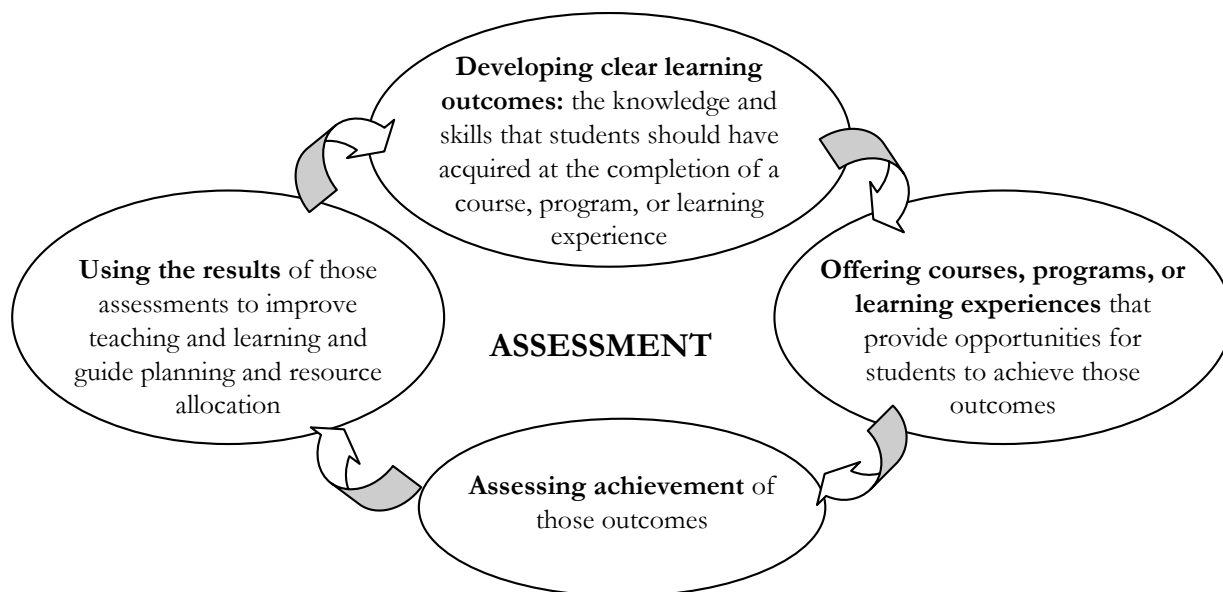
What is Assessment?

Fig. 1: The Assessment Cycle

Assessment is a teaching and management tool, designed to provide departments and units with quality information on which to improve learning and base organizational decisions. It is a process of defining a program or unit's mission, developing desired outcomes, continuously monitoring progress towards those outcomes, communicating results, and using those results to make improvements.

Assessment is a not a self-study, with a start date and end date; instead, it is a **continuous process of gathering, evaluating, and communicating information and using it to improve learning and institutional effectiveness.** Fig. 1 explains the assessment process in more detail and also illustrates its cyclical nature, with the information provided by one assessment cycle used to refine outcomes, assessment tools, learning experiences, and more in the next cycle.

Why Conduct Assessment?

The purpose of assessment is to engage the campus community in developing a systematic, ongoing, and transparent process to define goals and measure our progress towards those goals, improving student learning and the overall effectiveness of the university. Outcomes assessment can benefit **faculty and students** by:

- Helping clarify the mission of a program and identify the knowledge, skills, values, and perspectives that are critical for students to be taught

- Providing coherence and direction to the program's curriculum

- Ensuring that graduates of the program have acquired all of the essential skills and values and have achieved all key outcomes.

- Improving communication, coordination, and cooperation among faculty members in a program or department and across the university

- Providing students with clear expectations that help them understand how faculty will evaluate their work

- Providing students with feedback that helps them understand their strengths and weaknesses and where they need to focus more attention (Suskie 2004)

- Providing faculty with better information about what students understand and how they learn so that faculty can adjust their teaching methods, improve their skills as instructors, and build a knowledge base of scholarly research on learning within the discipline.

For **administrators**, assessment results can be used:

- As evidence of quality of teaching for tenure, promotion and salary decisions, grants and other funding, as well as for accreditation from professional associations (Suskie 2004)

- To ensure that general education outcomes are being met and that the University's core values are being integrated into student learning experiences ("Student Learning Assessment" 2003)

- To document the success of a program, department, or institution for employers, donors, government agencies, and accrediting organizations

- To help make informed decisions about budgeting, new programs, personnel decisions, faculty or staff hires, the need to improve or expand services, and more

- To ensure that resources are being allocated in the most effective way possible – where they'll have the greatest impact on helping the university achieve its mission. (Suskie 2004)

The Assessment Pyramid

Assessment is founded on a set of overall institutional outcomes, drawn from the institution's mission. Program level learning outcomes are developed from these outcomes; course level learning outcomes are developed from program outcomes; and lesson level outcomes arise from the outcomes of the course. All are designed to achieve the university's set of institutional outcomes.

Students learn specific skills and knowledge in each lesson of a course. These courses provide students with the opportunity to achieve program outcomes, which, when combined with the core curriculum and co-curricular and extra-curricular activities, help achieve the institution's goals. Fig. 2 illustrates the interconnected nature of outcomes development and achievement.

Fig. 2: The Outcomes Assessment Pyramid

Development of Learning Outcomes

Achievement of Learning Outcomes

Lesson Outcomes

Course Outcomes

Program Outcomes

Institutional Outcomes
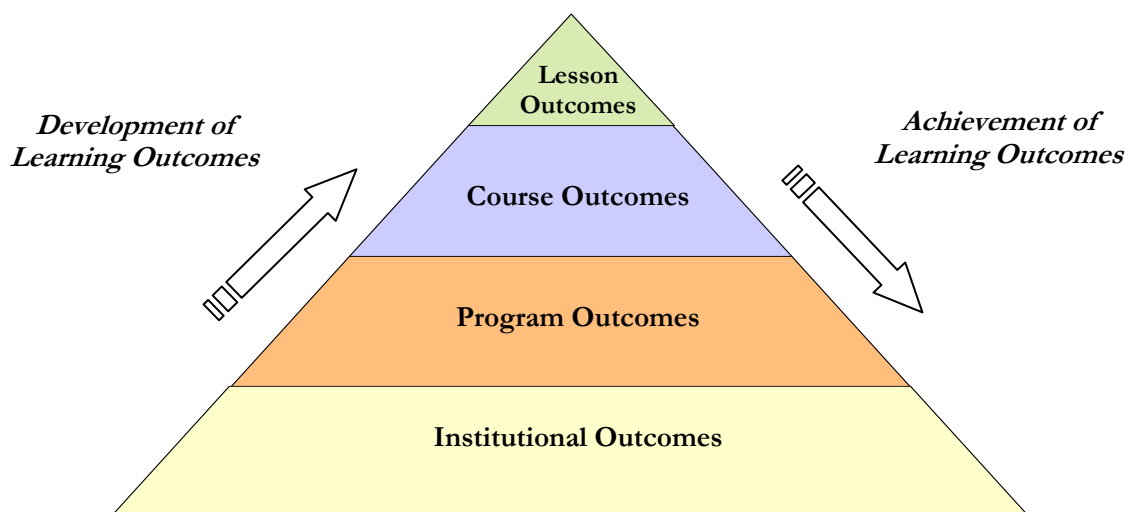
Adapted from Huba and Freed (2000), p. 108.

What are the Responsibilities of Faculty and Administrators for Assessment?

The primary purpose of outcomes assessment at AUC is to understand and improve the educational process. Faculty, therefore, must take the lead in implementing assessment. **Faculty members** are expected to:

1. Conduct classroom assessments in order to assess and improve student learning

2. Share the results of classroom assessments with colleagues to discuss ideas and strategies to improve student learning, participate in planning and conducting program assessment, and work with colleagues to improve program outcomes

3. Cooperate with school and university-wide assessment efforts through providing documentation for institutional assessment and accreditation efforts and by allocating classroom time for student surveys and other assessments

Responsibility for assessment is university-wide and is shared by the administration as well as the faculty. **Administrators** are expected to:

1. Create an environment that requires, supports, and rewards outcomes assessment at all levels and in all units

2. Provide adequate resources to support assessment efforts and facilitate faculty, program, and department changes recommended in response to assessment efforts

3. Encourage transparency and the sharing of assessment information with all stakeholders, as well as cross-discipline cooperation, dialogue, and activities supporting assessment efforts.

Institutional Support for Assessment

Assessment activities at the university are coordinated through Institutional Planning, Assessment, Planning, and Testing (IPART). IPART offers guidance, training, and support to help departments, units, schools and support offices conduct effective assessments. In addition, IPART has an extensive library of materials and guides to help faculty members develop effective assessment plans and tools as well as a website that provides online access to the university's knowledge bases of assessment tools, techniques, reports, surveys, news, events and more. The website can be accessed at ipart.aucegypt.edu.

The university's Center for Learning and Teaching is an important resource for faculty members to obtain skills in developing classroom assessment techniques as well as improving overall teaching effectiveness. The Center provides both short training courses as well as individual guidance.

Teaching Enhancement Grants are available to provide faculty with the resources needed to design, implement, and evaluate new modes of teaching and learning. This funding is available for the development of new teaching strategies, innovative teaching methods, and effective teaching styles; introducing multimedia and other technology-rich learning methods; developing effective and reliable methods of assessing teaching effectiveness, and more.

How Does Assessment Fit Into the Planning Process?

The results of outcomes assessment from courses and programs provide empirical data for departments and schools to develop their own annual and long-range plans. At the institutional level, this information, as well as information from assessment of institutional outcomes, is analyzed and coordinated within the scope of the university's mission and its projected resources and priorities to develop its recommendations for resource allocation and long-range planning.

Assessment results provide empirical support for decisions regarding allocation of resources and annual and long range planning at all levels of the university: program, department, school, and institution. Fig. 3 illustrates how assessment informs planning, resource allocation, and implementation of plans.

Fig. 3: The Link between Assessment, Planning, and Resource Allocation

Assessment

Implementation

Planning

**Resource Allocation/
Budget Preparation**
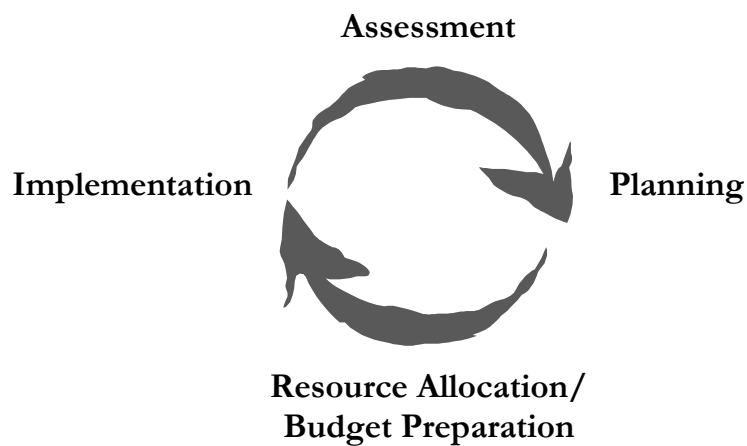
Eight Steps to Effective Outcomes Assessment

Step 1: Define the mission of your department or program

Your program's mission serves as the foundation for assessment planning. The mission statement should describe the purpose of the program as well as reflect the mission of the university.

For academic departments, the mission should focus on educational values, areas of knowledge in the curriculum, and careers or future studies for which graduates are prepared. Ideally, it should be stated concisely, in a few sentences.

The following are examples of mission statements:

Example 1: Construction Engineering (AUC)
To provide a high quality engineering education within a liberal arts context to students from Egypt as well as from other countries. The aim is to produce generations of engineers who will be leaders in their profession and able to manage projects and construction organizations. The pursuit of excellence is central to the department's mission, maintaining high standards of academic achievement, professional behavior, and ethical conduct.

Example 2: Engineering Services (AUC)
The mission of Engineering Services at the American University in Cairo is to provide high quality training and service to the industrial community in Egypt and other countries.

Example 3: The Writing Center (AUC)
The Writing Center is committed to developing students' communication abilities by providing services to enhance critical thinking, presentation, and writing skills for both graduates and undergraduates in all disciplines. As a function of this mission, we support the efforts of teaching and non-teaching faculty in all disciplines.

Step 2: Identify the most important outcomes of the department or program

Learning outcomes are the knowledge, skills, values, and attitudes that students gain from a learning experience. They address the following questions:

- What should students know and be able to do when they have finished their particular program at AUC?
- What knowledge, skills, or attitudes distinguish graduates from your program from other students?
- How do these outcomes tie in with the university's mission and educational goals?

Answering these questions produce statements of learning outcomes or learning goals (the two phrases are used interchangeably). The list does not need to include all learning outcomes, only the most important; more than two and less than eight is ideal.

Learning outcomes need to be specific, clear, and measurable and ideally include knowledge that students acquire, skills that students demonstrate, and attitudes that students develop. Well-defined outcomes are often stated as: "Students will …" or "Upon graduation, students will…"

In addition, when developing outcomes:

- Focus on the ends, not the means -- what students will do after completing the course or program, what the desired "end state" should be.

- Use an "action" verb to describe in an observable way what students should be able to do.

- Try not to be too broad or too specific.

Finally, share outcomes with students and staff. Students learn more effectively when they are given clear goals to help them focus on what's most important, understand how individual assignments or courses fit with the goals of the department, and how this course or program will help prepare them for life or careers after graduation. Program outcomes should be listed on the program's website, and course outcomes should be listed on course syllabi.

Sample Departmental Outcomes

Example 1: Business Administration (Bowling Green State University) (Student Achievement Assessment Committee (SAAC) 2007)
Graduates will be able to:
1. Demonstrate problem-solving, critical-thinking, oral and written communications, and team and leadership skills
2. Apply business tools and concepts in domestic and global contexts
3. Integrate foundational and functional business areas in making decisions
4. Show commitment to ethical values and behavior, continuous learning, and professional growth
5. Show understanding and appreciation for cultural, racial, and gender differences

Example 2: Computer Science (Bowling Green State University) ("Department and Program Learning Outcomes" 2007)
Graduates will be able to:
1. Program in a higher-level language
2. Work effectively with a client and members of a software development team to analyze, specify, design, implement, test, and document software that meets the client's needs
3. Acquire new computer-related skills independently as technologies evolve
4. Communicate technical concepts to non-technical persons, both orally and in writing
5. Develop a plan to integrate hardware and software into a particular environment
6. Conduct themselves in an ethical and professional manner

Example 3: Biology (AUC)
The graduates of the Biology Department will be able to:
1. Think critically, identify biological issues and formulate solutions to biological problems.
2. Use computers and information technology effectively to address biological problems.
3. Function effectively in a teamwork environment.
4. Apply knowledge in basic mathematics, general chemistry, calculus bases physics and statistics to solving biological problems.
5. Use their knowledge and comprehension of basic biological principles, concepts, and theories.
6. Evaluate and synthesize information and ideas from a variety of sources and formats.
7. Competently collect, analyze, organize, evaluate, and present scientific data.
8. Understand, analyze, and evaluate original research literature in support of current research projects.
9. Compete effectively for entry level employment and/or placement in graduate or professional training facilities.

Step 3: Ensure that students have adequate opportunities to achieve these outcomes

A program's curriculum needs to ensure that all students in the program have the opportunity to achieve these goals before they graduate. Program planners need to ask, "In what courses or experiences do students learn these skills or acquire this knowledge?"

A matrix can be a useful tool to map outcomes with the curriculum and learning experiences to ensure that all students are presented with adequate learning opportunities. A sample matrix is included in Appendix 2.

Step 4: Define how you will assess progress towards these outcomes

Assessments don't have to be complicated and, when used well, can be a powerful tool for improvement, providing better information for planning, budgeting, changes in curriculum, new programs, staffing, and student support. Student learning assessment data helps us understand what our students are learning, where they might be having difficulty, and how we can change the way we teach and how we can shape our curriculum to help them learn better. Assessment is *not* an evaluation of individual students, faculty or courses.

Start by taking an inventory of the kinds of tools your department or program is already using. Many departments and programs are already accessing student learning outcomes. These assessments might take the form of capstone courses, theses, papers, individual or group projects, performances, documentaries, presentations, student portfolios, alumni or employer surveys, student opinion surveys, focus groups, standardized tests, entry or exit tests or surveys, reports from internship supervisors, or other measures. Additionally, many offices on campus collect and analyze institutional data. These offices include IPART, Career Advising and Placement Services (CAPS), Alumni, Student Affairs, Graduate Studies, and others. This data can be analyzed to provide your program with information about your students and alumni.

Listed below are direct and indirect measures of student learning. Effective assessment plans must include a mix of direct and indirect methods of assessment.

Direct methods of evaluating student learning provide tangible evidence that a student has acquired a skill, demonstrates a quality, understands a concept, or holds a value tied to a specific outcome. They answer the question, "What did students learn as a result of this (assignment/project/exam…)?" and "How well did they learn?" Direct methods generally result in student "products" like term papers or performances.

Direct Methods of Assessing Student Learning:
- Capstone courses
- Review of senior projects by external evaluators (using scoring guidelines – see appendix 3)
- Licensure or certification exams
- Places in the curriculum where multiple faculty members examine student work, e.g. theses, video documentaries, art projects, research projects, etc. Scoring guidelines should be used – see appendix 3.
- Portfolios and e-portfolios, with material showing progression throughout major (See Appendix 5 for more information.)
- Entry and exit exams
- Homework assignments, examinations and quizzes, term papers and case studies
- Evaluations of student performance in internships, research projects, field work, or service learning.
- Classroom Assessment Techniques (CATs) (See Appendix 4)
- Standardized tests
- Videotape of oral presentations or performances

Indirect methods provide more intangible evidence, demonstrating characteristics associated with learning but only implying that learning has occurred. When a student answers a question correctly, there is direct evidence that he or she has learned. When a student *says* that he or she has an excellent understanding of the topic, there is indirect evidence. While both methods of assessing learning are valuable, indirect evidence is more meaningful when it is tied to direct evidence.

At the course level, course learning outcomes should be listed on the syllabi, and the course should be structured so that there are multiple opportunities for students to achieve the course outcomes.

Aren't Course Grades Enough? Assessment tries to link student performance to specific learning outcomes. Grades can be an excellent assessment tool, if the performance being graded is linked to a specific outcome. Traditional course grades tend to provide a summary measure of students' performance across many outcomes, which doesn't provide the kind of specific feedback necessary to link student performance to improvement. They can also include factors like attendance, participation, and test-taking skills. Course grades can provide insight, however, into a student's understanding of the course content and can serve as an indirect method of assessment.

What about Course Evaluations? Course evaluations are not a direct measure of student learning because they focus more on student perceptions of the quality of teaching than on learning outcomes. Some universities have modified their course evaluations to include questions that address student perceptions of learning as well. These kinds of questions would ask students how well they thought they achieved the learning goals of the course. An example of a revised course evaluation that does both is available at http://www.idea.ksu.edu/StudentRatings/index.html.

Step 5: Develop the assessment plan

Once the mission, learning outcomes and assessment methodologies have been developed, the assessment plan must be completed. See Appendix 6 for a template for an assessment plan at the program level. Program assessment coordinators should use this template to develop their plans and reports or create a text document that provides the same information in a similar format, e.g. assessment measures and benchmarks should be listed for each outcome, along with results and action plans for each outcome. This template can also be helpful for faculty planning assessment at the course level. When completed, the plan should be shared with the Dean and a copy sent to IPART.

Remember, not all outcomes need to be assessed – only those that are the most important. More than two and less than eight is generally a manageable number. In addition, not all outcomes must be assessed each year. Departments and programs can schedule assessment of outcomes over several years, if needed.

Before starting your plan, consider the following:

1. Are your learning outcomes well-stated? Are they measurable? Do they focus on outcomes rather than the process? Are they tied to AUC's institutional learning outcomes?

2. Are all of your outcomes being taught? Are they taught in a sensible sequence?

3. Are different sections of the same course sharing the same outcomes? While course content and teaching methods can differ, it often helps to ensure that all sections of the same course share the same learning goals.

4. When and how often will assessment information be collected and shared? With whom will it be shared?

5. How will you use the information? How will it be used to inform the department's decision-making? How will it affect course content and sequencing, testing, availability of labs and library resources, faculty-student interaction, course staffing, class size, student advising, and more?

Additional information on assessment, training, workshops, and other assistance is available from IPART and from the Center for Learning and Teaching. IPART's website also hosts a wide range of information and online resources as well as copies of this guide and the assessment plan template in downloadable format.

Step 6: Carry out the assessment

Once the plan is developed and submitted, the assessment process needs to be implemented. Remember, for program assessment, the goal is to assess program-level outcomes, not to evaluate individual students or faculty members. The assessment coordinator, or chair of an assessment committee, will manage the program's assessment process and will create a detailed timeline for the assessment cycle. The timeline might include dates for when work will be collected, when results will be tabulated and analyzed across the program, and when faculty will meet to discuss the results of the process and recommend changes. Items to consider include which courses and learning experiences are better suited for assessment, timelines and schedules, whether all students should be assessed or only a sample, and how to best protect the confidentiality of the students being assessed.

Step 7: Collect, analyze, communicate, and report on your findings

After assessment information is collected, the results need to be analyzed and communicated in useful ways to the faculty, who can consider changes to teaching methods, the curriculum, resource availability and scheduling, course content, and other factors.

At the end of the year, faculty members should complete an assessment report, similar in format to the plan, stating each course's learning outcomes, assessment tools used, results of the assessment, and how the results were used to make changes to help students and improve learning. A template for the report is included in the appendix.

The program's assessment coordinator should collect and tabulate results across the program and/or department and report that information back to the department or program faculty. A report template is provided in Appendix 7. The program's assessment coordinator should share the department/program's overall report with the Dean or Area Head and send a copy to IPART, which will provide timely feedback and comments. Departments and programs are encouraged to share their results with all stakeholders.

Assessment results should be used in preparation of departmental budgets and changes to the long-range plans. The results should also be used to review and adjust the department's assessment plans, to improve student learning.

Step 8: Take action based on those findings

Assessment results are meant to be used: to improve teaching and inform decision-making and resource allocation. Once assessment results have been collected and analyzed, faculty need to return to the department or program's learning goals – how do the results of the assessment meet those expectations? Were the standards that were set appropriate? Should performance expectations be changed? What aspects of the assessment process worked well and what changes might make it more effective? What were the most effective assessment tools? Can they be shared and used in other courses or programs?

Examples of some of the changes departments and programs might take include:

- Increasing the credit value of a key course, or divide a course into two courses
- Developing a capstone course
- Requiring students in their last semester to complete an independent project
- Developing rubrics with which faculty teams can better review students' projects
- Hiring or re-assigning faculty
- Increasing classroom space
- Adding new courses
- Re-designing the curriculum
- Increasing contacts with alumni
- Improving the website
- Providing training to faculty and staff

Keep track of planned changes to teaching practices, the curriculum, or other aspects of your program based on assessment results, those changes that have already been carried out in response to assessment results, and the impact those changes had on student learning and performance.

Assessment results are important evidence on which to base requests for additional funding, curriculum changes, new faculty lines, and more. Most importantly, the use of assessment results to make these kinds of changes to improve student learning and inform decision-making and planning is the reason why we assess. Even negative assessment results can have powerful, positive impact when they are used to improve the learning process.

Appendix 1: AUC's Mission and Outcomes

Mission Statement (2006-2007 Catalog)

The mission of the American University in Cairo (AUC) is to provide high quality educational opportunities to students from all segments of Egyptian society as well as from other countries, and to contribute to Egypt's cultural and intellectual life. The university offers programs at the undergraduate, graduate and professional levels as well as an extensive continuing education program. The language of instruction is English.

The university advances the ideals of American liberal arts and professional education and of life-long learning. As freedom of academic expression is fundamental to this effort, AUC encourages the free exchange of ideas and promotes open and on-going interaction with scholarly institutions throughout Egypt and other parts of the world.

The pursuit of excellence is central to AUC's mission, and the university maintains high standards of academic achievement, professional behavior and ethical conduct. Toward this end it also provides a broad range of disciplines and learning opportunities and strives to contribute to the sum of human knowledge.

AUC considers it essential to foster students' appreciation of their own culture and heritage and of their responsibilities to society. The university's aim of promoting international understanding is supported by means of scholarship, learned discourse, a multicultural campus environment, and a diversified publishing program.

To advance its mission, the university seeks to maintain a highly qualified faculty. Emphasis is placed on excellence in teaching as well as on research, creative work and faculty members' intellectual contributions to their disciplines. Outstanding administrative, professional and support staff, leading edge instructional technology and use of other resources are also central to the pursuit of the university's aims.

The American University in Cairo is an independent, non-profit, apolitical, non-sectarian and equal-opportunity institution.

University Learning Outcomes

Using AUC's mission statement as a guide, the university's Long-Range Planning subcommittee on assessment developed a set of educational outcomes for students, to be used in the development and assessment of student learning. These outcomes were later endorsed by the university's governance structure.

Because this process pre-dated the current assessment standards, many of the outcomes were not expressed in the current language of assessment. For that reason, these outcomes have been edited and organized into five logical groupings in the appropriate format as the university's key institutional learning outcomes for all students. These outcomes, which derive from institutional documents approved through the university's formal governance structure, are still in **draft format**, but they provide a strong foundation for the development of departmental assessment plans.

Professional Skills
AUC graduates will synthesize discipline-based knowledge with a broad-based liberal arts education. They will be proficient in the tools of their discipline as well as the tools of research and learning; make decisions that reflect the highest standards of ethical conduct and professional behavior; and understand the importance of life-long learning.

Advanced Communication Skills
AUC graduates will be fluent in English and will be able to write and speak effectively in a variety of settings. AUC graduates will be able to communicate in Arabic, establish rapport in groups, be adaptable to new circumstances, work both independently and in collaboration with others, and function effectively as leaders.

Critical Thinking

AUC graduates will be independent learners, adept at using current technologies to access information and applying strong quantitative, analytical, and critical thinking skills to analyze and synthesize complex information to solve problems.

Cultural Competence

AUC graduates will have an understanding and appreciation of Egyptian and Arab culture and heritage, as well as an understanding of international interdependence, cultural diversity, and consideration for values and traditions that may differ from their own. In addition, AUC graduates will have an aesthetic awareness of the various modes of human artistic expression and will be able to collaborate effectively in a multicultural context.

Effective Citizenship

AUC graduates value service to their local community and to broader causes at national and international levels.

Appendix 2: Curriculum Matrix

This matrix can be used to assist curriculum planners in developing curricula that provides all students with at least one, and preferably more than one, learning experience to gain the knowledge, skills and values detailed in each outcome.

This matrix can be used to assist in the development of course outcomes and syllabi. Course learning outcomes should be listed at the start of each course syllabus.

	Learning Outcome #1	Learning Outcome #2	Learning Outcome #3	Learning Outcome #4
XXXX 100	✔			✔
XXXX 101		✔	✔	
XXXX 102		✔	✔	
XXXX 203	✔		✔	✔
XXXX 204	✔			
XXXX 305		✔	✔	✔
XXXX 405				
Capstone	✔	✔	✔	✔
Internship	✔	✔	✔	✔

Appendix 3: Rubrics/Scoring Guidelines

Rubrics are one of the most powerful tools we have to assess progress toward achievement of specific skills or outcomes.

What is a rubric? A rubric is a criteria-based scoring guideline that can be used to evaluate student performance.

How is it used? It is given to the student at the time the assignment is given, to guide his/her work, and it is used by the person evaluating the assignment as the basis on which to judge the student's work.

Why use scoring guidelines (rubrics)?

1. They help students understand your expectations.

2. They can result in better performance, because they show students what exactly what the faculty member is looking for in an outstanding performance.

3. They make scoring easier and faster, because they give faculty members reminders of what they are looking for and the faculty members don't need to write as many comments.

4. They make scoring more accurate, consistent, and unbiased. Students immediately understand where they did well and where they went wrong, reducing arguments and debates over grades.

5. They give faculty members a better understanding of where students are at in terms of a particular concept or skill. (Suskie 2004)

When constructing a rubric, it can also be helpful to ask six questions (Huba and Freed 2000):

1. What criteria or essential elements must be present in the student's work to ensure it is high quality? These should distinguish good work from poor work.

2. How many levels of achievement do I wish to have for students, e.g. five levels from outstanding to poor, four levels from exemplary to unacceptable, etc.?

3. For each level, what is a clear description of performance at that level?

4. What are the consequences for performance at each level?

5. What rating scheme will be used? How many points will be assigned to each level and what weight will be given to each of the criteria?

6. What worked well, and how can the rubric be improved for use next time?

Rubrics are especially useful when more than one person will be grading a student's performance, to ensure that all graders are evaluating the performance by the same criteria.

Many faculty members from universities around the world make their rubrics freely available online, to serve as a guide or starting point for other instructors. IPART's Assessment website has an extensive list of these rubrics by discipline, as well as rubric templates, rubric generators, and guides.

Example: Oral Communications Assessment Rubric

Source: Oral Communications Assessment Rubric. Department of Chemical Engineering, Auburn University. June 3, 2007. <http://www.eng.auburn.edu/department/che/_doc/Oral Communication Assessment Rubric.doc>

Course No.: _____   Date: _____

Team/Student: _____   Reviewer: _____

Topic (Weight)	Unacceptable (0)	Marginal (1)	Acceptable (2)	Exceptional (3)	Points
Organization & Structure (1)	Not possible to understand presentation due to absence of structure.	Difficult to follow presentation due to erratic topical shifts and jumps.	Most information is presented in logical order which is easy to follow.	All information is presented in a logical, interesting and novel sequence, which is easily followed.	
Content & Knowledge (3)	No grasp of information. Unable to answer questions about subject.	Uncomfortable with information. Capable only of answering rudimentary questions.	At ease with content and able to elaborate and explain to some degree.	Demonstration of full knowledge of the subject with explanations and elaboration.	
Visual Aids & Neatness (2)	No visual aids.	Occasional use of visual aids, however they barely support text or presentation. Several misspellings and/or grammatical errors on slides.	Visual aids are related to text and presentation. Minor misspellings and/or grammatical errors.	Text and presentation are reinforced by the use of visual aids. Negligible misspellings and/or grammatical errors.	
Delivery & Speaking Skills (2)	Significant mumbling and incorrect pronunciation of terms. Voice level too low or too high. Monotonous, no eye contact, rate of speech too fast or too slow	Occasional mispronunciation of terms. Little eye contact, uneven rate, only little expression	Voice is clear and at a proper level. Most words pronounced correctly. Some eye contact, steady rate, excessively rehearsed	Clear voice and correct, precise pronunciation of terms. Good eye contact, steady rate, enthusiasm, confidence	
Presentation Length (1)	Too long or too short. +/– 10 minutes	+/– 6 minutes	+/– 4 minutes	+/– 2 minutes	
OVERALL PERFORMANCE	Unacceptable	Marginal	Acceptable	Exceptional	**TOTAL**
POINTS REQUIRED	**0–6**	**7–13**	**14–20**	**21–27**	

Appendix 4: Classroom Assessment Techniques (CATs)

Faculty members can use these to gather feedback about a single lecture or discussion. Results can be shared with students at the next lecture and used to help the faculty member target the gaps in the students' knowledge or understanding of a topic. These can become a regular activity in each class, and some can be adapted to be used online.

The Minute Paper – This is usually administered during the last two or three minutes of class. Instructors ask students to respond to questions like, "What was the most important thing you learned during this class?" "What important question remains unanswered?" Students write their responses anonymously on a half-sheet of paper or an index card and return them to the instructor. The instructor should provide feedback to the class during the next class period. (See sample below.)

> **Email Minute** – The instructor sends a summary of responses to the minute paper to the class, or distributes the questions in class and asks students to respond through email.

Muddiest Point – This CAT is like the minute paper, except the instructor asks, "What was the muddiest point in ____?" or "What is the one concept covered in today's class that you are still unclear about?" The instructor collects the responses and communicates the results to students during the next class period.

One Sentence Summary – Focusing on a particular topic, the instructor asks students to summarize the topic in one sentence, answering the questions "who does what to whom, when, where, how and why?" This CAT tests comprehension and encourages students to focus on key questions as they read.

Direct Paraphrasing – The instructor asks students to paraphrase part of a topic. They can also be asked to role-play (e.g. "Assume you are advisor to Harry Truman and have only 5 minutes to press him to consider alternatives to using the bomb on Japan."). Students can be assessed on whether the paraphrasing was accurate, relevant to the intended audience, and effective.

Application Cards – The instructor hands out index cards and asks students to write down at least one real-world application for what they have just learned. This generally takes no more than three to five minutes.

Post-Instruction Inventory – Once a new concept has been introduced, students describe how their perceptions or practices have changed.

One of the best sources for assessment tools is Angelo and Cross' book *Classroom Assessment Techniques: A Handbook for College Teachers*, available at AUC's Center for Learning and Teaching. IPART also has a collection of outstanding materials and books on student assessment.

Sample Minute Paper
Feel free to cut and use.

Course_____ Date_____

What was the most important thing you learned in class today?

What points are you still unclear about?

How would you rate today's class?
👎①②③④⑤👍

Course_____ Date_____

What was the most important thing you learned in class today?

What points are you still unclear about?

How would you rate today's class?
👎①②③④⑤👍

Course_____ Date_____

What was the most important thing you learned in class today?

What points are you still unclear about?

How would you rate today's class?
👎①②③④⑤👍
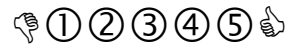
Course_____ Date_____

What was the most important thing you learned in class today?

What points are you still unclear about?

How would you rate today's class?
👎①②③④⑤👍

Course_____ Date_____

What was the most important thing you learned in class today?

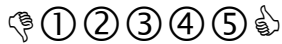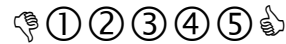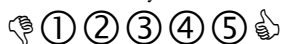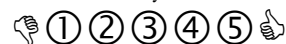What points are you still unclear about?

How would you rate today's class?
👎①②③④⑤👍

Appendix 5: Student Portfolios

Portfolios are a tool for students to collect their work that demonstrates progress and achievement and reflect upon their experiences and accomplishments either in a course, a program or throughout their university years. Graduates can present themselves professionally through their portfolios as they apply for graduate and work opportunities. The types or work generally included in the portfolio are research papers and other reports, multiple choice or essay examinations, self-evaluations, personal essays, journals, computational exercises and problems, case studies, audiotapes, videotapes, and short-answer quizzes. Portfolios are often structured so that the student self-selects the items to be included and may be required to document, for each selection, the reason why the item was selected, strengths and weaknesses, and the achievement or progress it represents.

Portfolio evaluation is a useful assessment tool because it allows faculty to analyze an entire scope of student work in a timely fashion. Portfolios used to assess writing skills, for example, can include a range of assignments that demonstrate progress towards goals and specific skill sets. For language programs, videotapes of students speaking the language in the classroom can be used to demonstrate conversational skills; for professional programs, they can be used to demonstrate proficiency and development of specific skill sets.

Collecting student work over time gives departments a unique opportunity to assess a students' progression in acquiring a variety of learning objectives and can provide valuable information about students' skills, knowledge, development, quality of writing, and critical thinking.

The following website provide additional information and samples (all available on IPART's website at ipart.aucegypt.edu):

- www.elon.edu/students/portfolio/

- www.uwstout.edu/soe/profdev/eportfoliorubric.html

- electronicportfolios.com/portfolios/site2000.html

- www.essentialschools.org/cs/resources/view/ces_res/225

- www.winona.edu/air/resourcelinks/OSU%20portfolio%20rubric.pdf

- www.uvm.edu/%7Ejmorris/rubricep.html

- pages.towson.edu/pryan/201/researchportfoliorubric.htm

Appendix 6: Format for Assessment Plan – Program Level

Matrix Format: This template is available in MS Excel and MS Word format on the IPART Assessment website at http://ipart.aucegypt.edu.

Program: **Date:**
Assessment Coordinator: **Ext.**   **Email:**
Program Mission Statement:

Program Outcomes	Is this a student learning outcome? (2-8 max)	Learning Opportunities: What courses or experiences provide students with the (primary) opportunity to achieve this outcome?	Assessment Methods/Measures: List the direct and indirect methods you will use to measure how well students are achieving this outcome.	Target Levels/ Benchmarks	When Will Assessment Be Conducted and Reviewed?	How Will Results Be Used and Communicated?

Appendix 6: Format for Program Assessment Plan

Alternate Format: This template is available in MS Word format on the IPART Assessment website at http://ipart.aucegypt.edu.

Program: **Date:**
Assessment   **Ext.:**   **Email:**
Coordinator:
Program Mission
Statement:

Outcome 1:

Is this a student learning outcome? ⭕ Yes ⭕ No

Learning Opportunities: *What courses or experiences provide students with the (primary) opportunity to achieve this outcome?*

Assessment Methods/Measures: *What courses or experiences provide students with the opportunity to achieve this outcome and how is it measured?*

Targets/Benchmarks:

When Will Assessment Be Conducted and Reviewed?

How Will Results Be Used and Communicated?

Outcome 2:

Is this a student learning outcome? ⭕ Yes ⭕ No

Learning Opportunities: *What courses or experiences provide students with the (primary) opportunity to achieve this outcome?*

Assessment Methods/Measures: *What courses or experiences provide students with the opportunity to achieve this outcome and how is it measured?*

Targets/Benchmarks:

When Will Assessment Be Conducted and Reviewed?

How Will Results Be Used and Communicated?
.

Appendix 6: Sample Completed Assessment Plan – Program Level

Program:	B.A., Sociology		Date: March 1, 2007
Assessment Coordinator:	Susan Smith	Ext. 1111	Email: smith@somewhere.edu
Program Mission Statement:	The mission of the undergraduate program in Sociology is to…..		

Program Outcomes	Is this a student learning outcome? (2-8 max)	Learning Opportunities *What courses or experiences provide students with the (primary) opportunity to achieve this outcome?*	Assessment Methods/Measures: *List the direct and indirect methods you will use to measure how well students are achieving this outcome.*	Target Levels/ Benchmarks	When Will Assessment Be Conducted and Reviewed?	How Will Results Be Used and Communicated?
Students who complete this program should have the ability to:						
Communicate ideas in a clear and logical manner in oral presentation	✔	SOC xxx SOC xxx SOC xxx Capstone	Final presentation in the capstone course, graded using scoring guidelines.	At least 80% of final presentations in the capstone course are rated as good or better	Each semester	All assessment results will be reviewed by faculty during a special faculty meeting at the end of each semester. The results will be used to recommend changes to the curriculum, development of rubrics and other assessment tools, changes to syllabi, etc.
			Alumni survey	At least 80% of respondents indicate that they are confident of their ability to express ideas in a clear, coherent manner in oral presentation	Every two years, beginning 3/07.	
Apply sociological concepts and principles to individual experiences and the social world.	✔	SOC xxx SOC xxx SOC xxx Capstone	A panel of faculty members evaluate graduating seniors' student portfolios developed throughout the program using a rubric.	At least 80% of students' portfolios are rated as good or better in achieving this outcome.	Each semester	
			Alumni survey	At least 80% of respondents indicate that they are confident of their ability to apply sociological concepts.	Every two years, beginning 3/07.	
Explain the major foundations of modern sociological theory and show how each of these foundations influences current sociological theories.	✔	SOC xxx SOC xxx SOC xxx Capstone	Final exam questions in capstone course, graded using a rubric.	At least 80% of senior theses are rated as good or better	Each semester	
			Graduating seniors exit interview	At least 80% of respondents indicate that they believe this learning outcome was achieved.	Each semester	

Appendix 6: Sample Completed Assessment Plan – Program Level

Adapted in part from ACEJMC Accreditation Standards and from Elon University's School of Communications Assessment Plan

Dept./Program: Journalism   **Date:**

Assessment Coordinator: **Joe Smith**   **Ext.**   **Email:**

Program Mission Statement: The mission of the undergraduate program in Journalism is to…

Program Outcomes *These should be specific and measurable, using action verbs and focusing on the desired end result of the program.*	*Is this a student learning outcome? (2 – 10 max)*	**Learning Opportunities** *What courses or experiences provide students with the (primary) opportunity to achieve this outcome?*	**Assessment Methods/Measures** *List the direct and indirect methods you will use to measure how well students are achieving this outcome.*	**Target Levels/ Benchmarks**	**When Will Assessments be Conducted and Reviewed?**	**How Will Results Be Used and Communicated?**
Graduates should be able to:						
Understand and apply the principles and laws of freedom of speech and press, including the right to dissent, to monitor and criticize power, and to assemble and petition for redress of grievances.	☑	Capstone course JCM 200 JCM 360 JCM 395	Course-based assessment (research paper and other writing assignments scored using rubrics, midterm and final exam questions relating to this outcome) Senior assessment exam (direct) Alumni survey designed around outcomes (indirect) Departmental review of seniors' performance in capstone course (direct)	75% demonstrate achievement of this outcome on research papers. 75% correctly answer exam questions. 75 % correctly answer questions related to this outcome. (Survey) 75% of alumni answer in top 2 categories for how the program contributed to the development of this outcome. (Capstone) 75% of seniors are judged by review to have sufficiently achieved this outcome.	Every semester	Results of assessments will be reviewed at the end of each semester in a special departmental meeting. Results will be used to make changes to following semester's course assignments. Aggregate results will be posted on department website and on annual assessment report.
Demonstrate an understanding of the history and roles of professionals and institutions in shaping communications.	☑	Capstone course JCM 200 JCM 360	Same as above	Same as above	Same as above	Same as above
Demonstrate an understanding of the diversity of groups in a global society in relationships to communications.	☑	Capstone course JCM 200 JCM 360	Same as above	Same as above	Same as above	Same as above
Understand concepts and apply theories in the use and presentation of images and information.	☑	Capstone course JCM 220 JCM 325 JCM 364	Same as above Student portfolio	Same as above Departmental review of portfolio shows that 75% of students score in the top two categories of the scoring guideline.	Same as above	Same as above
Demonstrate and understanding of professional ethical principles and work	☑	Capstone course JCM 200	Same as 1st outcome	Same as 1st outcome	Same as above	Same as above

ethically in pursuit of truth, accuracy, fairness, and diversity.		JCM 300 JCM 395			
Think critically, creatively, and independently.	☑	All courses, but special emphasis in JCM 381 (internship) and JCM 495 (Great Ideas: Capstone)	Same as 1st outcome Supervisor evaluation of internship (direct)	Same as 1st outcome All JCM students participate in internships, and 75% receive top two category ratings from evaluation.	Same as above	Same as above
Conduct research and evaluate information by methods appropriate to the communications professions in which they work.	☑	Capstone course JCM 218 JCM 300	Same as above Student portfolio	Same as 1st outcome Departmental review of portfolio shows that 75% of students score in the top two categories of the scoring guideline.	Same as above	Same as above
Write correctly and clearly in forms and styles appropriate for the communications professions, audiences, and purposes they serve.	☑	Capstone course JCM 218 JCM 300	Same as above Student portfolio	Same as 1st outcome Departmental review of portfolio shows that 75% of students score in the top two categories of the scoring guideline.	Same as above	Same as above
Critically evaluate their own work and that of others for accuracy and fairness, clarity, appropriate style, and grammatical correctness.	☑	Capstone course JCM 218 JCM 300 JCM 325	Same as 1st outcome. Student portfolio	Same as 1st outcome Departmental review of portfolio shows that 75% of students score in the top two categories of the scoring guideline.	Same as above	Same as above
Apply basic numerical and statistical concepts.	☑	Capstone course JCM 218 JCM 320	Same as 1st outcome	Same as above	Same as above	Same as above
Apply tools and technologies appropriate for the communications professions in which they work.	☑	Capstone course JCM 220 JCM 325 JCM 364	Same as 1st outcome Student portfolio	Same as 1st outcome Departmental review of portfolio shows that 75% of students score in the top two categories of the scoring guideline.	Same as above	Same as above

Appendix 7: Format for Annual Assessment Report – Program Level

Matrix Format: This template is available in MS Excel format and MS Word format on the IPART Assessment website at <u>http://ipart.aucegypt.edu</u>.

Dept./Program: **Year:**
Assessment Coordinator: **Ext.**   **Email:**
Program Mission
Statement:

Are course outcomes listed on syllabi for all courses? O Yes* O No

Program Outcomes	Learning Opportunities *What courses or experiences provide students with the (primary) opportunity to achieve this outcome?*	Assessment Methods/Measures* *List the direct and indirect methods you will use to measure how well students are achieving this outcome.*	Target Levels/ Benchmarks	Results/ Findings	Use of Results/Action Plan *How were the results communicated? What changes are planned based on the results?*

* Please include samples.

Additional comments:

Appendix 7: Format for Annual Assessment Report – Program Level

Alternate Format: This template is available in MS Word format on the IPART Assessment website at http://ipart.aucegypt.edu.

Program: **Date:**
Assessment   Ext.:   Email:
Coordinator:
Program Mission
Statement:

Are course outcomes listed on syllabi for all courses? O **Yes*** O **No**

Outcome 1:

Is this a student learning outcome? O Yes O No

Learning Opportunities: *What courses or experiences provide students with the (primary) opportunity to achieve this outcome?*

Assessment Methods/Measures*: *What courses or experiences provide students with the opportunity to achieve this outcome and how is it measured?*

Targets/Benchmarks:

Results/Findings:

Use of Results/Action Plan:

Outcome 2:

Is this a student learning outcome? O Yes O No

Learning Opportunities: *What courses or experiences provide students with the (primary) opportunity to achieve this outcome?*

Assessment Methods/Measures*: *What courses or experiences provide students with the opportunity to achieve this outcome and how is it measured?*

Targets/Benchmarks:

Results/Findings:

Use of Results/Action Plan:

Additional comments:

* Please include samples.

Appendix 7: Sample Completed Annual Assessment Report – Program Level

Adapted from UVa Civil Engineering Program Assessment Report, <u>Assessment Guide: Seven Steps to Developing and Implementing a Student Learning Outcomes Assessment Plan</u>. University of Virginia, Office of Institutional Assessment and Studies. 29 April 2007 <http://www.web.virginia.edu/IAAS/assessment/Assessment%20guide.pdf>.

Program:	**B.S., Civil Engineering**
Assessment Coordinator:	**Ext.** **Email:**
Program Mission Statement:	To provide our students with a fundamental, innovative Civil Engineering education in a way that fosters a lifetime of learning and leadership to address the needs of society.

Are course outcomes listed on syllabi for all courses? ✔ **Yes*** ○ **No**

Program Outcomes	Learning Opportunities *What courses or experiences provide students with the (primary) opportunity to achieve this outcome?*	Assessment Methods/Measures* *List the direct and indirect methods you will use to measure how well students are achieving this outcome.*	Target Levels/ Benchmarks	Results/ Findings	Use of Results/Action Plan *How were the results communicated? What changes are planned based on the results?*
A graduate of civil engineering:					
1. Can design a component of a civil engineering system, incorporating social, economic, ethical, and contractual considerations.	ENGR162, CE205, CE326, CE490, STS402. All except CE205 are required for CE majors.	Course work and end-of course memos from: Primary design examples will be chosen from each. All graduating students take exit surveys to determine if they feel confident that can design a civil engineering system component. Most CE students take Fundamentals of Engineering exam before graduation.	End of course documents should support student mastery of the material. 90% of the student agree or strongly agree that they can design a CE system component. Students should score above the national average on the related section of the FE exam Exit surveys determine whether students felt confident.	End of course memos and student course grades and performance indicate outcome is achieved. Students surveyed in 2001 did not have capstone CE490. Students in 2003 had capstone; students in 2004 had a course and associated design project. Self-confidence decreased from 2001, perhaps because students were more aware of challenges associated with design problems. Student achievement grew from 2% below the national average to 12% above the national average following implementation of capstone.	All assessment results are reviewed by faculty and changes to the curriculum are discussed... The capstone course has continued to evolve and now utilizes the expertise of highly experienced and practicing design engineers. Also, CE205 has been made a required course to ensure that all second-year civil engineers have a design experience....
2. Can develop a major research or design proposal for an engineering problem, complete the analysis, and	TCC401, TCC402, CE490	Course work and end-of-course memos	...End of course documents should support student mastery.	End of course memos and student course grades and performance indicate that this outcome is	TCC402 and CE490 continue to be modified to

prepare and present the results, while demonstrating an understanding of the role and impact of engineering research and practice on society.		Department thesis assessment. Exit surveys	Students should show proficiency in proposing and completing a major project, and an understanding of the role and impact of engineering on society. Goal is 90% agreement on items regarding ability in developing a research proposal and understanding the relationships between engineering and society.	achieved. 76% of theses indicated a reasonable to strong proficiency in proposing and completing a major project, and 80% demonstrated understanding of the role and impact of engineering on society. 87% of respondents say they can develop a major research or design project, while 97% feel they understand the role and impact of engineering research and practice on society.	potentially improve achievement.
3. Will demonstrate both leadership and teamwork capabilities.	ENGR162, CE205, CE490.	Course work and end-of-course memos Exit surveys	…End of course documents should support student mastery. Goal is 90% agreement (agree or strongly agree) that an outcome was achieved.	Based on the end of course memos and student achievement, this outcome is satisfactorily achieved. 2003-2004 survey: At the time of graduation, 96% of respondents agreed or strongly agreed that they had opportunities to demonstrate teamwork and leadership capabilities.	Department will work to improve quantification of teamwork assessment within group projects.

* Please include samples of assessment measures.

Additional Comments:

Appendix 8: Rubric For Feedback on Program Assessment Plans and Reports

Department: _____ Assessment Coordinator: _____

Degree Program: _____ Date: _____

Assessment Plan Elements	Best Practice	Meets Standard	Developing	Undeveloped
Student Learning Outcomes	At least two and not more than 10 clear, measurable key learning outcomes are stated, using action verbs and describing what students will know, think and be able to do upon completion of the requirement. These outcomes clearly reinforce university learning outcomes. ☐	At least two and not more than 10 clear, measurable key learning outcomes are stated, describing what students will know, think and be able to do upon completion of the requirement. ☐	Key learning outcomes are stated but are unclear; over-specific; do not use action verbs; and/or do not describe what students will know, think, and be able to do upon completion of the requirement. ☐	Key learning outcomes are not stated. ☐
Teaching/Learning Strategies	Every student has ample opportunity to master each learning outcome, by repeated emphasis and/or "hands-on" learning. ☐	Every student has adequate opportunity to master each learning outcome. ☐	Insufficient information is provided to indicate that students have adequate opportunities to master each outcome, or students are given sufficient opportunities to master some but not all outcomes. ☐	Insufficient information is provided. ☐
Assessment Methods	Multiple assessment methods are used for each outcome, including both direct and indirect measures. Assessment methods clearly match the outcome being assessed and provide clear, truthful information about whether or not an outcome is being achieved. ☐	At least one assessment measure is identified for each outcome. Each assessment method matches the outcome being assessed and provides clear, truthful information. Overall, the program features a mix of both direct and indirect measures. ☐	Assessment measures are identified for some outcomes. In some cases, assessment methods do not match the outcome being measured or do not yield clear and truthful information, and/or there is an imbalance in the mix of direct and indirect measures. ☐	Insufficient information is provided. ☐
Use of Results	Assessment results are shared and discussed with faculty and are used to modify learning outcomes, teaching methods, curricula, and/or assessment strategies. Targets or benchmarks have been established that describe minimum performance standards. Positive assessment results are shared with faculty, students, administrators and other audiences as appropriate. ☐	Assessment results are shared and discussed with faculty and are used to modify learning outcomes, teaching methods, curricula, and/or assessment strategies. ☐	Assessment information is collected, but the results are not shared, discussed and/or used in a systematic way to improve learning. ☐	There is no evidence that assessment results are shared and discussed or used to improve learning. ☐

Appendix 9: Glossary of Assessment Terms

Assessment: A continuous process of gathering, evaluating, and communicating information to improve learning and institutional effectiveness.

Assessment of Student Learning: The third element of a four-part cycle: developing articulated student learning outcomes, offering students opportunities to achieve those outcomes, assessing achievement of those outcomes, and using the results of those assessments to improve teaching and learning and inform planning and resource allocation decisions.[1]

Benchmark: A standard of comparison against which performance can be measured or assessed.

Classroom Assessment Techniques (CATs): Assessment tools that faculty members can use to gather timely feedback about a single lecture or discussion. Examples include the Minute Paper, the One Sentence Summary, and Direct Paraphrasing.

Criteria: An accepted standard, measure, or expectation used in evaluation or making decision-making.

Critical Success Factors (CSFs): Key areas of activity where positive results are necessary for the organization to achieve its goals.

Direct Measures: Measures which are directly tied to performance. In assessing student learning using direct measures, students' work or performance provides information directly linked to students' attainment of knowledge or skills. Direct measures are more reliable indicators of student learning than indirect measures. Examples include classroom and homework assignments, examinations and quizzes, capstone courses, student portfolios, and artistic performances.

E-Portfolio: A portfolio that is maintained online, containing student work in digital format.

Goal: Something the organization wants to achieve; desired outcomes for the organization or program, rather than actions. Goals are related to the institution or department's mission and vision.

Indirect Measures: Measures which are not directly tied to performance and often require inferences to be made about performance. Indirect measures often rely on perception and are less meaningful for assessment than direct measures. They are, however, helpful to corroborate the results of direct measures. Examples include exit surveys, student opinion surveys, alumni surveys, grades not based on scoring guidelines, retention and graduation statistics, career development over time, and student activities.

Institutional Effectiveness: The extent to which an institution has a clearly defined mission and institutional outcomes, measures progress towards achieving those outcomes, and engages in continuous efforts to improve programs and services.

Key Performance Indicators (KPIs): Quantifiable goals that measure performance. These goals should be well-defined, critical to an organization's success, and reflect the organization's mission and goals. KPIs are usually measured against benchmarks.

Learning Outcomes: The knowledge, skills, values, and attitudes that students gain from a learning experience.

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[1] Assessing Student Learning and Institutional Effectiveness: Understanding Middle States Expectation. Middle States Commission on Higher Education, 2005.

Mission: The purpose of an organization or program; its reason for existing. Mission statements provide the strategic vision or direction of the organization or program and should be simple, easily understood, and communicated widely.

Objective: The tasks to be completed in order to achieve a goal. Objectives are specific and measurable and must be accomplished within a specified time period.

Outcomes: Synonymous with goals. Outcomes are tied to the mission and are something that the organization, department, program, or unit wants to achieve. Outcomes should be specific, measurable, use action verbs, and focus on the ends rather than the means.

Portfolio: An accumulation of evidence about individual achievement or progress towards goals. Student portfolios used for assessment purposes may include but are not limited to projects, journals, research papers, creative writing, presentations, and video or recordings of speeches and performances.

Program Review: Periodic self-studies in which departments are asked to present their mission statements; resources, including the number of faculty, faculty qualifications and productivity, teaching load, curriculum, and technology; learning outcomes and assessment measures; the ways in which departments have shared assessment results and used those results to inform departmental decision-making; and plans for improving learning.

Qualitative Data: Data that cannot be measured or expressed in numerical terms and relates to or is based on the quality or character of something. Qualitative data describe or characterize something using words rather than numbers. Examples of qualitative data include surveys, focus groups, and feedback from external reviewers.

Quantitative Data: Data that is capable of being measured or expressed in numerical terms. Examples of quantitative data include test scores, grades, certification exam results, and graduation and retention rates.

Rubric: A criteria-based scoring guideline that can be used to evaluate performance. Rubrics indicate the qualities the judge/reviewer will look for in differentiating levels of performance and assessing achievement.

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