

***Handout 1: Example Program Assessment Plan:***

**Department of English  
University of California - Santa Barbara  
PROGRAM ASSESSMENT USING SENIOR CAPSTONE PROJECT**

***BA in English***

***1. Program Goal(s)***

- Students are expected to be familiar with major writers, periods and genres of English and American Literature and to be able to place important works and genres in their historical context.

***2. Learning Outcomes(s)***

- Discuss a major work or author in English and/or American Literature, or compare two or more works and authors; for example, analyze the character of Satan in Milton's *Paradise Lost*.
- Analyze a novel, short story, poem, play or a significant piece of prose showing familiarity with the techniques and literary contexts of the particular genre examined.
- Show knowledge of the historical context or literary period of the work or author being examined; for example, a discussion of Crane's Maggie as an example of American Naturalism.

***3. Assessment Method(s)***

- Portfolios reviewed and evaluated by departmental committee.

***4. Time Frame***

- Students will prepare the portfolios before the end of the senior year.
- Evaluation of the portfolios will be scheduled for each quarter.

***5. Who Will Do the Assessment?***

- Department Chair and appointed committee.

***6. How data will be used to improve program or revise curricula***

- The department will meet as a whole to discuss findings and will recommend to the Chair and curriculum committee methods of improving department procedures and curricula.

*Source: Program-Based Review and Assessment: Tools and Techniques for Program Improvement, Office of Academic Planning & Assessment, University of Massachusetts Amherst, Fall 2001.*

**Department of Mathematics**  
**University of Colorado at Boulder**  
**PROGRAM REVIEW USING COURSE-BASED ASSESSMENT OF EMBEDDED EXAM**  
**QUESTIONS**

*BA in Mathematics*

**1. Program Goal(s)**

Students are expected to know and be aware of:

- basic real analysis of one variable;
- calculus of several variables and vector analysis;
- the structure of mathematical proofs and definitions; and
- at least one additional specialized area of mathematics.

**2. Learning Outcome(s)**

- use techniques of differentiation and integration of one and several variables;
- solve problems using differentiation and integration;
- solve systems of linear equations;
- give direct proofs, proofs by contradiction, and proofs by induction;
- write a simple computer program

**3. Assessment Methods**

- Test questions developed by a committee of faculty and embedded in the mid-term and final exams of three upper level classes: Calculus 3, Linear Algebra, and Advanced Calculus.

**4. Time Frame**

- Students will take the courses proposed and will complete the mid-term and final exams for these courses. Evaluation of the exam questions will be scheduled at semester's mid-point and end.

**5. Who Will Do the Assessment?**

- Members of the departmental Undergraduate Committee, independent of the course instructors, will grade questions for outcomes assessment. The Department Chair and an appointed committee will review the Undergraduate Committee's report.

**6. How data will be used to improve program or revise curricula**

- The department will meet as a whole to discuss findings and will recommend to the Chair methods for improving curricula based on exam question assessment.

*Source: Program-Based Review and Assessment: Tools and Techniques for Program Improvement, Office of Academic Planning & Assessment, University of Massachusetts Amherst, Fall 2001.*

## **USF Illustrations**

### **Asian Studies PROGRAM ASSESSMENT**

#### **I. Program Goal(s)**

Graduates with a major in Asian Studies will be able to:

1. Explain different disciplinary perspectives on a particular issue or topic related to Asia.
2. Identify and interpret at least five philosophical or intellectual ideas that have shaped contemporary Asian societies
3. Discuss and write critically about historical and contemporary social, intellectual, religious, and economic issues relevant to their area of emphasis
4. Analyze and evaluate the transnational and global forces that link the nations of Asia to each other as well as to the West Coast of the U.S.

#### **II. Learning Outcomes(s)**

- 1a.
- 1b.
- 1c.

#### **III. Assessment Method(s)**

Rubrics

- 1a.
- 1b.
- 1c.

Measures

- 1a.
- 1b.
- 1c.

#### **IV. Time Frame**

- 1a.
- 1b.
- 1c.

#### **V. Who Will Do the Assessment?**

#### **VI. How data will be used to improve program or revise curricula**

**Asia Pacific Studies  
PROGRAM ASSESSMENT**

**I. Program Goal(s)**

Graduates of the USF Master of Arts in Asia Pacific Studies Program should be able to demonstrate:

1. An understanding of the East Asian region from a multi-disciplinary perspective;
2. An understanding of the interrelationships among the countries and cultures of East Asia in the context of the greater Pacific Rim;
3. The ability to articulate the differences and similarities in the approaches of individual national and cultural approaches to human rights and social justice, gender and class issues, the challenges of modernization, and the stresses of economic inter-penetration/globalization;
4. A low-intermediate competence in Chinese, Japanese, or Korean (or other Asia language as appropriate.)

**II. Learning Outcomes(s)**

- 1a.
- 1b.
- 1c.

**III. Assessment Method(s)**

Rubrics

- 1a.
- 1b.
- 1c.

Measures

- 1a.
- 1b.
- 1c.

**IV. Time Frame**

- 1a.
- 1b.
- 1c.

**V. Who Will Do the Assessment?**

**VI. How data will be used to improve program or revise curricula**

**Communication Studies  
PROGRAM ASSESSMENT**

**I. Program Goal(s)**

**Learning Goals for the Major in Communication Studies**

1. Students will demonstrate an understanding of how communication shapes patterns of social interaction, the expression of cultural values and norms, political practices and relations of power, and our positions as local and global citizens.
2. Students will be able to use a variety of methodological tools to analyze interpersonal, intercultural, and rhetorical discourse that structures everyday interactions in both our public and private lives.
3. Students will develop and hone the skills of speaking, writing, and critical thinking, and will be able to use these skills in their personal, professional and public lives.
4. Students will demonstrate an understanding of the possibilities, problems, and history of discourse and deliberation in democracy and will be prepared to use their knowledge to work for a just and more humane world.

**II. Learning Outcomes(s)**

- 1a.
- 1b.
- 1c.

**III. Assessment Method(s)**

Rubrics

- 1a.
- 1b.
- 1c.

Measures

- 1a.
- 1b.
- 1c.

**IV. Time Frame**

- 1a.
- 1b.
- 1c.

**V. Who Will Do the Assessment?**

**VI. How data will be used to improve program or revise curricula**

**Comparative Literature and Culture  
PROGRAM ASSESSMENT**

**I. Program Goal(s)**

**Learning Goals for the Major in Comparative Literature and Culture**

1. Students will be able to engage in comparative analysis of literary texts and other cultural artifacts that seek to enhance our understanding of cross-national cultural commonalities and differences.
2. Students will be able to demonstrate a comprehensive understanding of the literary and cultural influences that inform distinct or mutually divergent literary and art traditions.
3. Students will be able to bridge the divisions between national literatures and cultures instead of concentrating on a single tradition or their own.
4. Students will become functionally fluent and literate in a language other than English.
5. Students will gain knowledge and understanding of other cultures, cultural aspects of the language, and the people

**II. Learning Outcomes(s)**

- 1a.
- 1b.
- 1c.

**III. Assessment Method(s)**

Rubrics

- 1a.
- 1b.
- 1c.

Measures

- 1a.
- 1b.
- 1c.

**IV. Time Frame**

- 1a.
- 1b.
- 1c.

**V. Who Will Do the Assessment?**

**VI. How data will be used to improve program or revise curricula**

**English**  
**PROGRAM ASSESSMENT**

**I. Program Goal(s)**

Learning Goals for the B.A. in English

1. Students will have acquired a basic understanding of the literary, historical, social, or cultural influences that inform literary works.
2. Regardless of the language of the texts or the language of instruction, students will have articulated in writing and discussion their responses to literary texts.
3. Students will have developed a basic critical ability to identify, interpret, and evaluate the ideas and formal features of an integrated body of literary texts.

**II. Learning Outcomes(s)**

- 1a.
- 1b.
- 1c.

**III. Assessment Method(s)**

Rubrics

- 1a.
- 1b.
- 1c.

Measures

- 1a.
- 1b.
- 1c.

**IV. Time Frame**

- 1a.
- 1b.
- 1c.

**V. Who Will Do the Assessment?**

**VI. How data will be used to improve program or revise curricula**

**Modern and Classical Languages  
French  
PROGRAM ASSESSMENT**

**I. Program Goal(s)**

Learning Goals for the B.A. in French Studies

1. Students will have acquired a basic understanding of the literary, historical, social, or cultural influences that inform French and Francophone literary works.
2. Students will have acquired the ability to express themselves in French, and to articulate in writing and discussion their responses to literary texts.
3. Students will have developed a basic critical ability to identify, interpret, and evaluate the ideas and formal features of an integrated body of literary texts authored in the French language.
4. Students will have developed sensitivity to the plurality of meanings within a literary text authored in French.

**II. Learning Outcomes(s)**

1a.

1b.

1c.

**III. Assessment Method(s)**

Rubrics

1a.

1b.

1c.

Measures

1a.

1b.

1c.

**IV. Time Frame**

1a.

1b.

1c.

**V. Who Will Do the Assessment?**

**VI. How data will be used to improve program or revise curricula**

**Modern and Classical Languages**  
**Spanish**  
**PROGRAM ASSESSMENT**

**I. Program Goal(s)**

Students will be able to:

1. Articulate in Spanish, either in conversation/discussion or in writing (both formal and informal models) information and opinions on a variety of issues, including texts and cultural artifacts.
2. Demonstrate a basic understanding of several of the many cultures of Spanish speakers in their varied dimensions (social, economic, political, religious, artistic), as the result of thoughtful academic study as well as personal engagement with Spanish speakers in their own communities (either abroad or through service learning).
3. Demonstrate a basic critical ability to identify, interpret, and evaluate the ideas and formal features of an integrated body of literary texts and cultural artifacts, showing sensitivity to the plurality of meanings within them.
4. Demonstrate a basic understanding of the literary, historical, social, or cultural influences that inform literary works or other cultural artifacts produced in the Spanish-speaking world, including diversity of perspectives, experiences, and traditions.

**II. Learning Outcomes(s)**

1a.

1b.

1c.

**III. Assessment Method(s)**

Rubrics

1a.

1b.

1c.

Measures

1a.

1b.

1c.

**IV. Time Frame**

1a.

1b.

1c.

**V. Who Will Do the Assessment?**

**VI. How data will be used to improve program or revise curricula**

**Modern and Classical Languages  
Japanese Studies  
PROGRAM ASSESSMENT**

**I. Program Goal(s)**

**Learning Goals for the B.A. in Japanese Studies**

1. Students will acquire Japanese skills that will enable them to converse at an upper-intermediate level of proficiency, to read newspaper or magazine articles and some short literary works with the aid of a dictionary, to write short essays, letters, or business memos, and to comprehend television programs or films on general-interest topics.
2. Students will gain a comprehensive understanding of the historical development and contemporary state of the Japanese language, literature, and selected aspects of culture, and also the competency to employ the analytical and conceptual tools relevant to their study.
3. Students will develop communicative and research skills, and the requisite linguistic and cultural knowledge to deploy them effectively, that will prepare them to pursue graduate work, or alternatively, careers in teaching Japanese at the secondary level, Japan-related business, and governmental or NGO opportunities.

**II. Learning Outcomes(s)**

- 1a.
- 1b.
- 1c.

**III. Assessment Method(s)**

Rubrics

- 1a.
- 1b.
- 1c.

Measures

- 1a.
- 1b.
- 1c.

**IV. Time Frame**

- 1a.
- 1b.
- 1c.

**V. Who Will Do the Assessment?**

**VI. How data will be used to improve program or revise curricula**

**Philosophy**  
**PROGRAM ASSESSMENT**

**I. Program Goal(s)**

Students will be able to:

1. Understand the value of thinking philosophically by reflecting on the meaning of one's own life, the conceptual foundations of human actions and beliefs, the nature of the self and of human responsibility.
2. Understand and discuss coherently the central philosophical issues, such as the problem of evil, the existence of God, free will, the mind/body relation, human knowledge, and the question of being.
3. Demonstrate an ability to identify and articulate, both orally and in writing, the primary philosophical themes and issues found in the writings of the major philosophers.
4. Demonstrate an ability to evaluate philosophical arguments critically, both orally and in writing, using philosophical methods that have been developed by either historical or contemporary philosophers.

**II. Learning Outcomes(s)**

1a.

1b.

1c.

**III. Assessment Method(s)**

Rubrics

1a.

1b.

1c.

Measures

1a.

1b.

1c.

**IV. Time Frame**

1a.

1b.

1c.

**V. Who Will Do the Assessment?**

**VI. How data will be used to improve program or revise curricula**

## **Theology & Religious Studies PROGRAM ASSESSMENT**

### **I. Program Goal(s)**

Students will develop competence in these areas;

1. Human Dimensions of Religion, Theology, and Spirituality
  - a. Students will be able to understand their own spirituality and recognize how religion, theology, and spirituality underlie and correlate with a broad range of human experience.
2. Religious Diversity
  - a. Students will be able to understand, differentiate, and appreciate various religious traditions, as encouraged by Vatican II's stance on the Catholic Church's relationship with other faiths. This understanding will entail the creedal vision, moral teachings, historical context, social expression, and key rites and symbols of these faith traditions.
3. Social Justice
  - a. Students will investigate and discuss how religious and theological traditions can work effectively for social justice and for the good of the entire human family and the environment that sustains it.
4. **Ethics**

Students will be able to:

  - a. Identify and articulate central ethical problems concerning equality, justice, and rights, and understand the role these play in personal and professional life.
  - b. Compare and contrast major ethical theories, to show how actions can be determined to be just or unjust, right or wrong, or good or bad, and to demonstrate knowledge of the strengths and weaknesses of major ethical theories.
  - c. Investigate ways of settling ethical disputes in arriving at ethical judgments.
  - d. Think and write critically about classic and contemporary moral issues.
  - e. Identify the contributions of diversity and recognize the challenge that it presents in resolving contemporary ethical issues.
  - f. Demonstrate an ability to apply ethical theories and values in personal decision-making.

### **II. Learning Outcomes(s)**

- 1a.
- 1b.
- 1c.

### **III. Assessment Method(s)**

Rubrics

- 1a.
- 1b.
- 1c.

Measures

1a.

1b.

1c.

**IV. Time Frame**

1a.

1b.

1c.

**V. Who Will Do the Assessment?**

**VI. How data will be used to improve program or revise curricula**

**Visual Arts  
PROGRAM ASSESSMENT**

**I. Program Goal(s)**

**Learning Goals for the B.A. in Visual Arts**

1. Students will gain a solid historical foundation from the inception of pre-historical art, to the most recent historical contextualizations of contemporary art, with a wide knowledge of the cultural diversity of art movements and their associated critical theories, both locally and globally.
2. Students will gain a solid foundation in the technical skills and conceptual skills involved in the production of visual artwork while being nurtured in a creative environment that encourages experimentation. Instruction in a variety of two-dimensional and three-dimensional media, as well as time-based art will teach students how to use these skills to find their own individual artistic voices.
3. Students will be experienced in evaluating the success and professional quality of their own artwork and the artwork of their peers, through the regular classroom process of rigorous, yet supportive, group and individual critiques.
4. Students will graduate with a deep appreciation and knowledge of how to use their skills as visual artists to help to create social change and to help transform the world. Visual Art students will graduate with solid connection to, and working relationships with, local, national and international community-based organizations, educational institutions, art galleries and art museums; paving their paths for continued and future associations with the world beyond USF as graduate students, artists and as citizens.

**II. Learning Outcomes(s)**

1a.

1b.

1c.

**III. Assessment Method(s)**

Rubrics

1a.

1b.

1c.

Measures

1a.

1b.

1c.

**IV. Time Frame**

1a.

1b.

1c.

**V. Who Will Do the Assessment?**

**VI. How data will be used to improve program or revise curricula**

## **Architecture and Community Design PROGRAM ASSESSMENT**

### **I. Program Goal(s)**

Students who complete the B.A. in Architecture and Community Design will:

1. gain a historical foundation of architecture from pre-history to recent developments in the field, through a broad and inclusive approach to the range of social and economic factors affecting the design of world cities and buildings.
2. develop familiarity with social justice issues in under-served communities and developing regions of the world as well as more traditional perspectives on architectural history.
3. develop critical skills and methodologies of inquiry, analysis, conceptual development, and resolution and presentation of design ideas.
4. Learn to integrate aspects of site, program, space, structure and material to create designs for buildings, which also actively respond to the historical, cultural, social and political exigencies of time and place.
5. develop analytical tools that give attention to the various historic and social forces that intersect to create the built environment.
6. gain a solid foundation in technical and conceptual design skills, enabling them to present their architectural ideas visually, verbally and in writing to clients, associates, and communities at the grass roots and municipal levels.
7. graduate with the knowledge and skills enabling them to facilitate positive change to built environments in the world.

### **II. Learning Outcomes(s)**

1a.

1b.

1c.

### **III. Assessment Method(s)**

Rubrics

1a.

1b.

1c.

Measures

1a.

1b.

1c.

### **IV. Time Frame**

1a.

1b.

1c.

### **V. Who Will Do the Assessment?**

### **VI. How data will be used to improve program or revise curricula**

## **Performing Arts and Social Justice PROGRAM ASSESSMENT**

### **I. Program Goal(s)**

#### **Learning Goals for the Department of Performing Arts**

1. Students will gain a solid historical foundation of the Performing Arts (Music, Theater, and Dance) from Ancient Greece to the most recent historical contextualizations of contemporary performance, with a wide knowledge of the cultural diversity of performance and associated critical theories, both locally and globally.
2. Students will gain a solid foundation in the technical skills and conceptual skills involved in the production of performance, while being nurtured in a creative environment that encourages experimentation. Instruction in a variety of disciplines will teach students how to use their skills to find their own individual artistic voices.
3. Students will be experienced in evaluating the success and professional quality of their own performances and the artwork of their peers, through the regular classroom process of rigorous, yet supportive, group and individual reflection, critique, and process.
4. Students will graduate with a deep appreciation and knowledge of how to use their skills as performing artists to help to create social change and to help transform the world. Performing Arts students will graduate with solid connections to, and working relationships with, local, national and international community-based organizations, educational institutions, cultural organizations; paving their paths for continued and future associations with the world beyond USF as graduate students and artists for others.

### **II. Learning Outcomes(s)**

- 1a.
- 1b.
- 1c.

### **III. Assessment Method(s)**

#### Rubrics

- 1a.
- 1b.
- 1c.

#### Measures

- 1a.
- 1b.
- 1c.

### **IV. Time Frame**

- 1a.
- 1b.
- 1c.

### **V. Who Will Do the Assessment?**

### **VI. How data will be used to improve program or revise curricula**

**MFA in Writing  
PROGRAM ASSESSMENT**

**I. Program Goal(s)**

**Learning Goals for the M.F.A. in Writing Program**

1. Students should be able to demonstrate in their writing a fluid knowledge of the fundamentals of artistic composition and craft.
2. Students should be able to read as writers: to recognize structural elements and esthetic choices in a given work of literary art, and understand the ways in which literary meaning is made.
3. Students should be aware of the diverse historical and cultural traditions that inform the genre in which they are working.
4. Students should be able to evaluate and critique works of literary art (whether by themselves or others), and be able to participate in constructive critical discussion of such works.
5. Students should understand the process of revision, the criteria for completion, and the methodology by which writing may be brought to the public as published work.

**II. Learning Outcomes(s)**

1a.

1b.

1c.

**III. Assessment Method(s)**

Rubrics

1a.

1b.

1c.

Measures

1a.

1b.

1c.

**IV. Time Frame**

1a.

1b.

1c.

**V. Who Will Do the Assessment?**

**VI. How data will be used to improve program or revise curricula**

## ***Handout 2 Outcomes Worksheet:***

### **Learning outcomes**

The statement of outcomes of a program must denote *measurable* attributes *observable* in the graduate of the program; otherwise it is impossible to determine whether or not the program is meeting the outcomes. Tests or examinations are the milestones along the road of learning and are supposed to tell the teacher and the student the degree to which both have been successful in their achievement of the course outcomes.

An advantage of clearly defined outcomes is that the student is provided the means to evaluate his/her own progress at any place along the route of instruction; thus, the student knows which activities on his/her part are relevant to his/her success. A meaningfully stated outcome is one that succeeds in communicating to the reader the writer's instructional intent and one that excludes the greatest number of possible alternatives to your goal.

“ <i>BAD</i> ” words (open to many interpretations, these mainly describe goals)	“ <i>GOOD</i> ” words (open to fewer interpretations)
--	--

To KNOW	To WRITE
To UNDERSTAND	To RECITE
To ENJOY	To IDENTIFY
To APPRECIATE	To DIFFERENTIATE
To GRASP THE SIGNIFICANCE OF	To SOLVE
To COMPREHEND	To CONSTRUCT
To BELIEVE	To LIST

To WRITE
To RECITE
To IDENTIFY
To DIFFERENTIATE
To SOLVE
To CONSTRUCT
To LIST
To COMPARE
To CONTRAST

The idea is to describe what the learner will be *doing* when demonstrating that he/she “understands” or “appreciates”.

Steps to write outcomes that will describe the desired behavior of the learner:

- [1] Identify the terminal behavior or *performance* by name; i.e., specify the kind of behavior that will be accepted as evidence that the learner has achieved the outcome.
- [2] Define the desired behavior further by describing the important *conditions* under which the behavior will be expected to occur.
- [3] Specify the *criteria* of acceptable performance by describing how well the learner must perform to be considered acceptable.

Verbs helpful in drafting learning outcomes:

Concrete verbs such as “define,” “argue,” or “create” are more helpful for assessment than vague verbs such as “know,” “understand,” or passive verbs such as “be exposed to.” Some examples of action words frequently used in outcomes are included in the table below.					
Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation
define	classify	apply	Analyze	arrange	appraise
identify	describe	compute	appraise	assemble	assess
indicate	discuss	construct	calculate	collect	choose
know	explain	demonstrate	categorize	compose	compare
label	express	dramatize	compare	construct	contrast
list	identify	employ	contrast	create	decide
memorize	locate	give examples	Criticize	design	estimate
name	paraphrase	illustrate	Debate	formulate	evaluate
recall	recognize	interpret	determine	manage	grade
record	report	investigate	Diagram	organize	judge
relate	restate	operate	differentiate	perform	measure
repeat	review	organize	distinguish	plan	rate
select	suggest	practice	examine	prepare	revise
underline	summarize	predict	experiment	produce	score
	tell	schedule	Inspect	propose	select
	translate	shop	inventory	set-up	value
		sketch	question		
		translate	Relate		
		Use	Solve		

**Program learning outcomes examples:**

- *Students will demonstrate* the research skills necessary to collect and evaluate data to make effective managerial decisions
- *Demonstrate* competence in inferential statistical skills using computer software
- *Analyze* how ethnic diversity contributes to the cultural richness of a nation
- *Evaluate* environments of organizations in terms of performance and develop responsive strategies and structures
- *Discuss* the ethical and social implications of the uses of information technology
- *Compare* various theoretical approaches to the causes of poverty in developing and industrialized nations
- *Develop and sustain* historical arguments on the development of nation states
- *Examine* the processes that explain personality development from childhood to adulthood
- *Analyze* how Politics differs from other social sciences
- *Interpret* texts drawn from a variety of religious traditions with sensitivity to their historical context

Source: Program-Based Review and Assessment: Tools and Techniques for Program Improvement, Office of Academic Planning & Assessment, University of Massachusetts Amherst, Fall 2001.

**Exercise #1 and #2:**

This worksheet will help you refine your department learning goals and to develop corresponding learning outcomes. Remember that an outcome is the specific learning behavior that the student should demonstrate in the context of achieving the goal. You may end up with more than one outcome for each goal.

<b>Program Goal</b>	<b>Outcome(s)</b>
<b>1.</b>	<b>a)</b>
<b>Defined:</b> <i>(see Handout #5 for examples)</i>	<b>b)</b>
	<b>c)</b>

*Source: Program-Based Review and Assessment: Tools and Techniques for Program Improvement, Office of Academic Planning & Assessment, University of Massachusetts Amherst, Fall 2001.*

*Handout 3 and Exercise #3: Program/Departmental Outcome Rubrics*

Outcome	Very Poor Achievement of Outcome	Poor Achievement of Outcome	Average Achievement of Outcome [Benchmark Standard]	Good Achievement of Outcome	Very Good Achievement of Outcome
1a.	a.	b.	c.	d.	e.
1b.	a.	b.	c.	d.	e.

*Handout 4: Sample Curriculum Mapping: Linking goals/outcomes to the curriculum*

**A Generic Illustration**

<b>Student Learning Outcomes: Students will--</b>	<b>ZZ 101</b>	<b>ZZ 102</b>	<b>ZZ 215</b>	<b>ZZ 217</b>	<b>ZZ 308</b>	<b>ZZ 311</b>	<b>ZZ 404</b>	<b>ZZ 405</b>	<b>ZZ 413</b>	<b>ZZ 414</b>
use the basic terminology of the field	X	X	X							
explain assumptions underlying the major perspectives of the field			X	X		X				
apply major perspectives of the field to a given problem					X		X			X
evaluate research results									X	X
evaluate conclusions derived from research									X	X
design an appropriate research project to answer a research question										X
apply ethical principles when simulating professional practice										

### An Illustration

**Key** I = Introduced  
M = Moderate Coverage  
C = Comprehensive Coverage

Goals/Outcomes	Course Numbers															
	QSMIS 182	QSMIS 183	QSMIS 281	QSMIS 284	ACCT G 214	ACCT G 215	ECON 201	ECON 202	ECON 342	BLAW 251	FINAN 331	MGMT 361	MKTG 371	MGMT 367	MGMT 368	MGMT 499
<b>1. Become effective in written and oral communication</b>																
a. Graduates will exhibit skill and competency in written business communication through the preparation of business memorandum, business letters, and business reports, business plans, presentations, and general business correspondence.												M				M
b. Graduates will exhibit skill and competency in giving professional and effective business presentations through the construction of a formal graphical presentation in front of peers and faculty.												M				M
<b>2. Become better decision-makers through critical thinking and problem solving. Graduates will exhibit the ability to:</b>																
a. structure and synthesize information,			C	C			C	C				C				C
b. apply analytical procedures for the purpose of drawing useful conclusions,			C	C			C	C				C				C
c. formulate proposed solutions, and			C	C			C	C				C				C
d. propose decisions about business related problems.			C	C			C	C				C				C
<b>3. Develop the proficiency to adapt technology to communicate, analyze and support core business competencies</b>																
a. Graduates will identify appropriate applications and the use of technological resources to solve business issues.			M	M			M	M								M

**Exercise #4: Curriculum Mapping Worksheet**

**Program/Department:** \_\_\_\_\_

**Key** I = Introduced with minimal coverage  
 M = Moderate Coverage  
 C = Comprehensive Coverage

	Your Course Numbers															
<b>Your Program/Departmental Goals/Outcomes</b>																
<b>Goal 1.</b>																
<b>Outcome 1a.</b>																
<b>Outcome 1b.</b>																

*Handout 5: Rubrics for Assessing the Quality of Academic Program Learning Outcomes—August 10, 2007 Draft*

<b>Criterion</b>	<b>Initial</b>	<b>Emerging</b>	<b>Developed</b>	<b>Highly Developed</b>
Comprehensive List	The list of outcomes is problematic: e.g., very incomplete, overly detailed, inappropriate, and disorganized. It may include only discipline-specific learning, ignoring relevant institution-wide learning. The list may confuse learning processes (e.g., doing an internship) with learning outcomes (e.g., application of theory to real-world problems).	The list includes reasonable outcomes but does not specify expectations for the program as a whole. Relevant institution-wide learning outcomes and/or national disciplinary standards may be ignored. Distinctions between expectations for undergraduate and graduate programs may be unclear.	The list is a well-organized set of reasonable outcomes that focus on the key knowledge, skills, and values students learn in the program. It includes relevant institution-wide outcomes (e.g., communication or critical thinking skills). Outcomes are appropriate for the level (undergraduate vs. graduate); national disciplinary standards have been considered.	The list is reasonable, appropriate, and comprehensive, with clear distinctions between undergraduate and graduate expectations, if applicable. National disciplinary standards have been considered. Faculty have agreed on explicit criteria for assessing students' level of mastery of each outcome.
Assessable Outcomes	Outcome statements do not identify what students can do to demonstrate learning. Statements such as "Students understand scientific method" do not specify how understanding can be demonstrated and assessed.	Most of the outcomes indicate how students can demonstrate their learning.	Each outcome describes how students can demonstrate learning, e.g., "Graduates can write reports in APA style" or "Graduates can make original contributions to biological knowledge."	Outcomes describe how students can demonstrate their learning. Faculty have agreed on explicit criteria statements, such as rubrics, and have identified examples of student performance at varying levels for each outcome.
Alignment	There is no clear relationship between the outcomes and the curriculum that students experience.	Students appear to be given reasonable opportunities to develop the outcomes in the required curriculum.	The curriculum is designed to provide opportunities for students to learn and to develop increasing sophistication with respect to each outcome. This design may be summarized in a curriculum map.	Pedagogy, grading, the curriculum, relevant student support services, and co-curriculum are explicitly and intentionally aligned with each outcome. Curriculum map indicates increasing levels of proficiency.
Assessment Planning	There is no formal plan for assessing each outcome.	The program relies on short-term planning, such as selecting which outcome(s) to assess in the current year.	The program has a reasonable, multi-year assessment plan that identifies when each outcome will be assessed. The plan may explicitly include analysis and implementation of improvements.	The program has a fully-articulated, sustainable, multi-year assessment plan that describes when and how each outcome will be assessed and how improvements based on findings will be implemented. The plan is routinely examined and revised, as needed.
The Student Experience	Students know little or nothing about the overall outcomes of the program. Communication of outcomes to students, e.g. in syllabi or catalog, is spotty or nonexistent.	Students have some knowledge of program outcomes. Communication is occasional and informal, left to individual faculty or advisors.	Students have a good grasp of program outcomes. They may use them to guide their own learning. Outcomes are included in most syllabi and are readily available in the catalog, on the web page, and elsewhere.	Students are well-acquainted with program outcomes and may participate in creation and use of rubrics. They are skilled at self-assessing in relation to the outcomes and levels of performance. Program policy calls for inclusion of outcomes in all course syllabi, and they are readily available in other program documents.

### **How Visiting Team Members Can Use the Learning Outcomes Rubric**

Conclusions should be based on a review of learning outcomes and assessment plans. Although you can make some preliminary judgments about alignment based on examining the curriculum or a curriculum map, you will have to interview key departmental representatives, such as department chairs, faculty, and students, to fully evaluate the alignment of the learning environment with the outcomes.

#### ***The rubric has five major dimensions:***

1. **Comprehensive List.** The set of program learning outcomes should be a short but comprehensive list of the most important knowledge, skills, and values students learn in the program, including relevant institution-wide outcomes such as those dealing with communication skills, critical thinking, or information literacy. Faculty generally should expect higher levels of sophistication for graduate programs than for undergraduate programs, and they should consider national disciplinary standards when developing and refining their outcomes, if available. There is no strict rule concerning the optimum number of outcomes, but quality is more important than quantity. Faculty should not confuse learning processes (e.g., completing an internship) with learning outcomes (what is learned in the internship, such as application of theory to real-world practice). **Questions.** Is the list reasonable, appropriate and well-organized? Are relevant institution-wide outcomes, such as information literacy, included? Are distinctions between undergraduate and graduate outcomes clear? Have national disciplinary standards been considered when developing and refining the outcomes? Are explicit criteria – as defined in a rubric, for example – available for each outcome?
2. **Assessable Outcomes.** Outcome statements should specify what students can do to demonstrate their learning. For example, an outcome might state that “Graduates of our program can collaborate effectively to reach a common goal” or that “Graduates of our program can design research studies to test theories and examine issues relevant to our discipline.” These outcomes are assessable because faculty can observe the quality of collaboration in teams, and they can review the quality of student-created research designs. Criteria for assessing student products or behaviors usually are specified in rubrics, and the department should develop examples of varying levels of student performance (i.e., work that does not meet expectations, meets expectations, and exceeds expectations) to illustrate levels. **Questions.** Do the outcomes clarify how students can demonstrate learning? Have the faculty agreed on explicit criteria, such as rubrics, for assessing each outcome? Do they have examples of work representing different levels of mastery for each outcome?
3. **Alignment.** Students cannot be held responsible for mastering learning outcomes unless they have participated in a program that systematically supports their development. The curriculum should be explicitly designed to provide opportunities for students to develop increasing sophistication with respect to each outcome. This design often is summarized in a curriculum map—a matrix that shows the relationship between courses in the required curriculum and the program’s learning outcomes. Pedagogy and grading should be aligned with outcomes to foster and encourage student growth and to provide students helpful feedback on their development. Since learning occurs within and outside the classroom, relevant student services (e.g., advising and tutoring centers) and co-curriculum (e.g., student clubs and campus events) should be designed to support the outcomes. **Questions.** Is the curriculum explicitly aligned with the program outcomes? Do faculty select effective pedagogy and use grading to promote learning? Are student support services and the co-curriculum explicitly aligned to promote student development of the learning outcomes?
4. **Assessment Planning.** Faculty should develop explicit plans for assessing each outcome. Programs need not assess every outcome every year, but faculty should have a plan to cycle through the outcomes over a reasonable period of time, such as the period for program review cycles. **Questions.** Does the plan clarify when, how, and how often each outcome will be assessed? Will all outcomes be assessed over a reasonable period of time? Is the plan sustainable, in terms of human, fiscal, and other resources? Are assessment plans revised, as needed?
5. **The Student Experience.** At a minimum, students should be aware of the learning outcomes of the program(s) in which they are enrolled; ideally, they should be included as partners in defining and applying the outcomes and the criteria for levels of sophistication. Thus it is essential to communicate learning outcomes to students consistently and meaningfully. **Questions:** Are the outcomes communicated to students? Do students understand what the outcomes mean and how they can further their own learning? Do students use the outcomes and criteria to self-assess? Do they participate in reviews of outcomes, criteria, curriculum design, or related activities?

*Handout 6: Example Defining Learning goals and outcomes*

**Goal:**

**1. Students that finish this program will become effective in written and oral communication**

**Defined: Students will be expected to develop both written and oral communication skills during their course of study. They will use various forms of communication, including: correspondence, reports, research papers, short oral presentations, formal presentations (utilizing visual aids such as Power Point, etc.) and spreadsheets with supporting documentation.**

**Measurable Outcomes:**

- a. Graduates will exhibit the ability to prepare research reports.
- b. Graduates will exhibit the ability to prepare multi-media presentations.
- c. Graduates will exhibit the ability to prepare general correspondence.
- d. Graduates will exhibit the skills and competency in giving professional and effective presentations. These skills will include using clear and understandable diction, personal appearance, etc.

**Performance Rubrics:**

	<b>Very Poor Achievement of Outcome</b>	<b>Poor Achievement of Outcome</b>	<b>Average Achievement of Outcome [Benchmark Standard]</b>	<b>Good Achievement of Outcome</b>	<b>Very Good Achievement of Outcome</b>
a.	Students barely exhibit the ability to be able to prepare a research report either in style or content.		Students at this level can format a research report according to MLA, APA or other assigned report style.		Students' reports are near error free in style, format and articulation of research findings.
b.	Students do not use assigned multimedia program and/or there is very little evidence of style, format, or clarity.		Presentation is very basic and barely holds the audience's interest. Style and formatting is weak and there is no real evidence of a style sheet being used.		Presentation is captivating in style and format. Interesting backgrounds are used, graphics enhance what is being presented, and verbiage is the right amount and clearly visible. Colors used in multimedia presentation do not clash.

**Possible measurement methods:**

- Pre, Post video taping of presentations
- Written samples
- Portfolios

**Goal:**

*2. Students that finish this program will become better decision-makers through critical thinking and problem solving*

**Defined: Students will be required to analyze information, identify problems and issues, develop recommendations (including an assessment of each recommendation), and make decisions.**

**Measurable Outcomes:**

- Graduates will exhibit the ability to:
  - a. structure and synthesize information,
  - b. apply analytical procedures for the purpose of drawing useful conclusions,
  - c. develop proposed solutions, and
  - d. make decisions about related problems.

**Possible measurement methods:**

- The assignment of a (scientific method) research project
- Capstone course

**Goal:**

*3. Students that finish this program will develop the proficiency to adapt technology to communicate, analyze and support core competencies*

**Defined: Students will be knowledgeable of basic technological applications and be able to apply technology to improve processes and convey necessary information.**

**Measurable Outcomes:**

- a. Graduates will be able to identify applications and use technology to complete assignments.
- b. Graduates will become proficient (as defined further in the rubrics) in the use of basic Word, PowerPoint, and Excel.

**Possible measurement methods:**

- Assignments will be turned in using components of MS Office.
- Portfolios of first and last assignments

## Handout #7: Examples of Assessment Approaches and Glossary of Assessment Methods

The following table identifies various types of assessment data, methods for collecting these data, and the sort of information each method provides.

<b>Examples of Assessment Approaches Available</b>			
<b>Data</b>	<b>Assessment Tool</b>	<b>Who or What is Analyzed?</b>	<b>What Can Be Assessed?</b>
<b>Self-reports</b>	classroom assessment	alumni	<i>Perceptions about:</i>
	focus groups	employers	campus climate
	interviews	enrolled students	learning
	phone surveys/interviews	faculty	evaluate processes
	reflective essays	graduating students	the value of the experience
	surveys (home-grown or standardized)	entering students	educational outcomes
		off-campus supervisors	attitudes
		parents	values
	staff		
<b>Achievement Tests</b>	test score analysis	competitions embedded questions on exams	mastery and knowledge of principles, skills
	content analysis	locally developed exams	the value of the experience
	scoring rubrics	oral thesis defenses	
		oral exams, recitals	
		standardized tests	
<b>Observations</b>	case studies	campus events (sports, theater)	attitudes
	observations	classes	campus climate
		club meetings	interactions
		faculty offices	processes
		fieldwork sites	services
		student services offices	student involvement
			student learning
<b>Student Academic Work</b>	content analysis	capstone course products homework papers	mastery and knowledge of principles, skills
	scoring rubrics	portfolios	values
		presentations, performances	processes
		publications	the value of the experience
		research reports	
		term papers, theses	
		videotapes	
<b>Campus Documents</b>	course x program objectives matrix	administrative units departments	accuracy cohesion/consistency
	course assignment x program objectives matrix	programs in student service offices	efficiency structure for promoting
	content analysis	course syllabi, etc.	objectives
	analysis of forms	student transcripts	processes

*Adapted from California State University, Bakersfield, PACT Outcomes Assessment Handbook (1999).*

## Glossary of Assessment Methods

Source: OAPA Handbook PROGRAM-Based Review and Assessment • UMass Amherst

### Alumni Surveys

*Description:* Surveying department alumni can provide a wide variety of information about program satisfaction, how well students are prepared for their careers, what types of jobs or graduate degrees majors have gone on to obtain, starting salaries for graduates, and the skills that are needed to succeed in the job market or in graduate study. These surveys provide the opportunity to collect data on which areas of the program should be changed, altered, improved or expanded.

*Strengths and Weaknesses:* Alumni surveying is usually a relatively inexpensive way to collect program data from individuals who have a vested interest in helping you improve your program as well as offering the opportunity for improving and continuing department relationships with program graduates. However, without an easily accessible and up-to-date directory of alumni, they can be difficult to locate. It also takes time to develop an effective survey and ensure an acceptable response rate.

*Adapted from Palombo et al. Ball State University, Assessment Workbook (2000).*

### Culminating Assignments

*Description:* Culminating assignments offer students the opportunity to put together the knowledge and skills they have acquired in the major, provide a final common experience for majors, and offer faculty a way to assess student achievement across a number of discipline-specific areas. Culminating assignments are generally designed for seniors in a major or field to complete in the last semester before graduation. Their purpose is to integrate knowledge, concepts and skills that students are expected to have acquired in the program during the course of their study. This is obviously a curricular structure as well as an assessment technique and may consist of a single culminating course (a “capstone” course) or a small group of courses designed to measure competencies of students who are completing the program. A senior assignment is a final culminating project for graduating seniors such as a performance portfolio or a thesis that has the same integrative purpose as the capstone course.

*Strengths and Weaknesses:* Many colleges and universities are using capstone courses to collect data on student learning in a specific major or in general education or core requirement programs. Putting together an effective and comprehensive capstone course can be a challenge, however, particularly for those programs that mesh hands-on technical skills with less easily measurable learning outcomes. Also, there is a great deal of start-up time to developing appropriate and systematic methods for assessing these or other culminating experiences. See Content Analysis and Primary Trait Analysis below for further information.

*Adapted from the University of Wisconsin, Madison, Outcomes Assessment Manual (2000).*

### Content Analysis

*Description:* Content analysis is a technique that looks at a group of students, such as majors in a program or department, and assesses samples of written work that are produced by this group. This assessment method uses outcomes identified as important prior to the analysis or as the analysis proceeds. For example, you might want to determine how well majors in your department write. To use content analysis to assess their writing skills, you will need a representative sample of the writing. Analysis may look at what students actually write or at the underlying meaning of their writing. Results are generally presented in written form giving averages and examples of specific categories of outcomes (e.g., spelling errors). Primary trait analysis, which identifies important characteristics of specific assignments and assigns levels of competency to each trait, can be particularly effective in identifying student learning.

*Strengths and Weaknesses:* Content analysis allows you to assess learning outcomes over a period of time and can be based on products that were not created for program assessment purposes. Because writing samples can be re-examined, content analysis also makes it easier to repeat portions of the study and provides an unobtrusive way to assess student learning. However, accuracy of the assessment is limited to the skill of the person(s) doing the analysis. Data is also limited by the set of written work and

may not be relevant to technical skills valued by a particular field or major that involve hands-on performance. Pre-testing coding schemes, using more than one analyst per document, and concrete materials and coding schemes can improve the reliability of this technique.

*Adapted from the California State University Bakersfield, PACT Outcomes Assessment Handbook (1999).*

### **Course-embedded Assessment**

*Description:* Course-embedded assessment refers to methods of assessing student learning within the classroom environment, using course goals, objectives and content to gauge the extent of the learning that is taking place. This technique generates information about what and how students are learning within the program and classroom environment, using existing information that instructors routinely collect (test performance, short answer performance, quizzes, essays, etc.) or through assessment instruments introduced into a course specifically for the purpose of measuring student learning.

*Strengths and Weaknesses:* This method of assessment is often effective and easy to use because it builds on the curricular structure of the course and often does not require additional time for data collection since the data comes from existing assignments and course requirements. Course-embedded assessment does, however, take some preparation and analysis time and, while well documented for improving individual courses, there is less documentation on its value for program assessment.

*Adapted from the University of Wisconsin, Madison, Outcomes Assessment Manual (2000), and the California State University, Bakersfield, PACT Outcomes Assessment Handbook (1999).*

### **Curriculum Analysis**

*Description:* Curriculum analysis involves a systematic review of course syllabi, textbooks, exams, and other materials to help you clarify learning objectives, explore differences and similarities between course sections, and/or assess the effectiveness of instructional materials. It offers a way to document which courses will cover which objectives and helps in sequencing courses within a program. Also see Matrices.

*Strengths and Weaknesses:* Using curriculum analysis as an assessment tool can be a valuable way of tracking what is being taught where. It can provide assurance that specific learning goals and objectives are being covered in the program and can pinpoint areas where additional coverage is needed. This method, however, can be time-consuming, particularly in large departments with many courses and different instructors, and there may be little consistency between how learning objectives are addressed in one course and how they are taught in another.

*Adapted from the Ball State University, Assessment Workbook, 1999 and The University of Wisconsin, Madison, Outcomes Assessment Manual I (2000).*

### **Delphi Technique**

*Description:* The Delphi technique is used to achieve consensus among differing points of view. In its original form, a team of experts, who never actually meet, are asked to comment on a particular issue or problem. Each member's response is reviewed and a consensus determined. Any member whose response falls outside of the consensus is asked to either defend or rethink the response. The anonymity provided by this technique offers more junior members of the team an equal chance to get their ideas out, as well as permits a challenge to the ideas of senior members that might never take place in an open forum. More recently, the Delphi technique has been modified so that teams of individuals are brought together to discuss an issue or problem face-to-face and reaching a consensus at the meeting. For instance, a team of faculty members might meet to review possible goals and objectives for their department in an effort to develop a set of goals and objectives on which they can agree.

*Strengths and Weaknesses:* The Delphi technique can be useful in bringing together diverse opinions in a discussion forum. This technique fails, however, when the facilitator lacks objectivity or when the participants feel unsafe or insecure in voicing their real opinions. For instance, a faculty member discussing intended goals and objectives might not be comfortable in disagreeing with the department head. For this technique to succeed, care must be taken to appoint an impartial facilitator and to convince

participants that differing opinions are welcome. Returning to the original design of this technique with an anonymous team who have never met, might ensure more honest and open input.

## **Employer Surveys**

*Description:* Employer surveys help the department determine if their graduates have the necessary job skills and if there are other skills that employers particularly value that graduates are not acquiring in the program. This type of assessment method can provide information about the curriculum, programs and student outcomes that other methods cannot: on-the-job, field-specific information about the application and value of the skills that the program offers.

*Strengths and Weaknesses:* Employer surveys provide external data that cannot be replicated on campus and can help faculty and students identify the relevance of educational programs, although, as is true in any survey, ambiguous, poorly-worded questions will generate problematic data. Additionally, though data collected this way may provide valuable information on current opinion, responses may not provide enough detail to make decisions about specific changes in the curriculum or program. Also, it is sometimes difficult to determine who should be surveyed, and obtaining an acceptable response rate can be cost and time intensive.

*Adapted from the Ball State University, Assessment Workbook (1999), the California State University, Bakersfield, PACT Outcomes Assessment Handbook (1999), and the University of Wisconsin, Madison, Outcomes Assessment Manual I (2000).*

## **Focus Groups**

*Description:* Focus groups are structured discussions among homogeneous groups of 6-10 individuals who respond to specific open-ended questions designed to collect data about the beliefs, attitudes and experiences of those in the group. This is a form of group interview where a facilitator raises the topics for discussion and collects data on the results. Emphasis is on insights and ideas.

*Strengths and Weaknesses:* Focus groups can provide a wide variety of data about participants' experiences, attitudes, views and suggestions, and results can be easily understood and used. These groups allow a small number of individuals to discuss a specific topic in detail, in a non-threatening environment. Data collected in this way, however, is not useful for quantitative results, and qualitative data can be time-consuming and difficult to analyze because of the large amount of non-standardized information. Ultimately, the success of this method depends on a skilled, unbiased moderator and appropriate groups of participants.

*Adapted from Palombo et al. Ball State University, Assessment Workbook (2000); and the California State University, Bakersfield, PACT Outcomes Assessment Handbook (1999).*

## **Institutional Data**

*Description:* A variety of departmental and student data are routinely collected at the university level. These data can enhance and elaborate on data you collect in the department. Institutional data can tell you whether the program is growing, what the grade point average is for majors in the program, and what the retention rate is for your students.

*Strengths and Weaknesses:* Institutional data are generally easily accessible and readily available. Student and departmental data are collected on a systematic and cyclical schedule that can offer you both current and longitudinal information. On the other hand, these data sets are generally large and may be difficult to sort through, particularly for those individuals who are not used to working through large databases. The data may be less useful to specific departments or programs because the information collected is very often general (age, gender, race, etc.) and may not directly relate to program goals and objectives.

*Adapted from the Ball State University, Assessment Workbook (1999).*

## Matrices

*Description:* At its most basic, a matrix is a grid of rows and columns used to organize information. For assessment purposes, a matrix can be used to summarize the relationship between program objectives and course syllabus objectives, course assignments, or courses in a program or department. Matrices can be used for curriculum review, to select assessment criteria or for test planning. A matrix can also be used to compare program outcomes to employer expectations.

*Strengths and Weaknesses:* Using a matrix can give you a good overview of how course components and curriculum link to program objectives, can help you tailor assignments to program objectives, and can lead to useful discussions that in turn lead to meaningful changes in courses or curricula. However, because a matrix can offer a clear picture of how program components are interconnected and can reveal where they are not, acknowledging and responding to discrepancies may involve extensive discussion, flexibility and willingness to change.

*Adapted from the Ball State University, Assessment Workbook, revised April (2000), and the California State University, Bakersfield, PACT Outcomes Assessment Handbook (1999).*

## Observations

*Description:* Observation as a method of assessment is an unobtrusive tool that can yield significant information about how and why students learn. You may choose to observe any relevant interactive event, such as classes, club meetings, or social gatherings. This tool is generally used when you are interested in how students study, are concerned about the effectiveness of study sessions or other supplementary activities, or when you are focusing on the relationship between out-of-class behavior and in-class performance. Data collected through observation can be correlated with test scores and/or course grades to help provide further insight into student learning.

*Strengths and Weaknesses:* Data collected through observation can yield important insight into student behavior that may be difficult to gauge through other assessment methods. This method is typically designed to describe findings within a particular context and often allows for interaction between the researcher and students that can add depth to the information collected. It is especially useful for studying subtleties of attitudes and behavior. Observed data, however, is not precise and cannot be generalized to larger populations. Conclusions may be suggestive rather than definitive, and others may feel that this method provides less reliable data than other collection methods.

*Adapted from the California State University, Bakersfield, PACT Outcomes Assessment Handbook (1999).*

## Performance Assessment

*Description:* Performance assessment uses student activities to assess skills and knowledge. These activities include class assignments, auditions, recitals, projects, presentations and similar tasks. At its most effective, performance assessment is linked to the curriculum and uses real samples of student work. This type of assessment generally requires students to use critical thinking and problem-solving skills within a context relevant to their field or major. The performance is rated by faculty or qualified observers and assessment data collected. The student receives feedback on the performance and evaluation.

*Strengths and Weaknesses:* Performance assessment can yield valuable insight into student learning and provides students with comprehensive information on improving their skills. Communication between faculty and students is often strengthened, and the opportunity for students' self-assessment is increased. Performance assessment, like all assessment methods, is based on clear statements about learning objectives. This type of assessment is also labor-intensive, is sometimes separate from the daily routine of faculty and student, and may be seen as an intrusion or an additional burden. Articulating the skills that will be examined and specifying the criteria for evaluation may be both time-consuming and difficult.

*Adapted from the California State University, Bakersfield, PACT Outcomes Assessment Handbook (1999).*

## **Portfolio Evaluations**

*Description:* Portfolios are collections of student work over time that are used to demonstrate student growth and achievement in identified areas. Portfolios can offer information about student learning, assess learning in general education and the major, and evaluate targeted areas of instruction and learning. A portfolio may contain all or some of the following: research papers, process reports, tests and exams, case studies, audiotapes, videotapes, personal essays, journals, self-evaluations and computational exercises. Portfolios are often useful and sometimes required for certification, licensure, or external accreditation reviews.

*Strengths and Weaknesses:* Portfolios not only demonstrate learning over time, but can be valuable resources when students apply to graduate school or for jobs. Portfolios also encourage students to take greater responsibility for their work and open lines of discussion between faculty and students and among faculty involved in the evaluation process. Portfolios are, however, costly and time-consuming and require extended effort on the part of both students and faculty. Also, because portfolios contain multiple samples of student work, they are difficult to assess and to store and may, in some contexts, require too much time and effort from students and faculty alike.

*Adapted from the California State University, Bakersfield, PACT Outcomes Assessment Handbook (1999), and the University of Wisconsin, Madison, Outcomes Assessment Manual I (2000).*

## **Pre-test/Post-test Evaluation**

*Description:* This method of assessment uses locally developed and administered tests and exams at the beginning and end of a course or program in order to monitor student progression and learning across pre-defined periods of time. Results can be used to identify areas of skill deficiency and to track improvement within the assigned time frame. Tests used for assessment purposes are designed to collect data that can be used along with other institutional data to describe student achievement.

*Strengths and Weaknesses:* Pre-test/post-test evaluations can be an effective way to collect information on students when they enter and leave a particular program or course, and provide assessment data over a period of time. They can sample student knowledge quickly and allow comparisons between different students groups, or the same group over time. They do, however, require additional time to develop and administer and can pose problems for data collection and storage. Care should be taken to ensure that the tests measure what they are intended to measure over time (and that they fit with program learning objectives) and that there is consistency in test items, administration and application of scoring standards.

*Adapted from the California State University, Bakersfield, PACT Outcomes Assessment Handbook (1999), and the University of Wisconsin, Madison, Outcomes Assessment Manual I (2000).*

## **Reflective Essays**

*Description:* Reflective essays may be used as an assessment tool to gauge how well students understand class content and issues. They are generally short essays (5 to 10 minutes) on topics related to the course curriculum and may be given as in-class assignments or homework. Reflective essays may be voluntary or required, open-ended questions on surveys required in student portfolios or capstone composition courses.

*Strengths and Weaknesses:* Reflective essays as an assessment tool can offer data on student opinions and perspectives at a particular moment in a class. Essays will provide a wide array of different responses and might lead to increased discussion among faculty and students. On the other hand, poorly worded, ambiguous questions will yield little, and opinions and perceptions may vary in accuracy. Analysis of essay content also takes additional time and expertise.

## Scoring Rubrics

*Description:* Scoring rubrics are typically grids that outline identified criteria for successfully completing an assignment or task and establish levels for meeting these criteria. Rubrics can be used to score everything from essays to performances. Holistic rubrics produce a global score for a product or performance. Primary trait analysis uses separate scoring of individual characteristics or criteria of the product or performance.

*Strengths and Weaknesses:* Scoring rubrics allow the instructor to efficiently and consistently look at complex products or performances and to define precise outcomes and expectations. They also are easily shared with students. However, developing an effective rubric can be time-consuming and often requires ongoing edits to fine tune criteria and anticipated outcomes. Training raters to use the scoring rubrics in a consistent manner also involves a significant time commitment.

*Adapted from the California State University, Bakersfield, PACT Outcomes Assessment Handbook (1999).*

## Standardized and Local Test Instruments

*Description:* Selecting a standardized instrument (developed outside the institution for application to a wide group of students using national/regional norms and standards) or a locally-developed assessment tool (created within the institution, program or department for internal use only) depends on specific needs and available resources. Knowing what you want to measure is essential to successful selection of standardized instruments, as is administering the assessment to a representative sample in order to develop local norms and standards. Locally-developed instruments can be tailored to measure specific performance expectations for a course or group of students.

*Strengths and Weaknesses:* Locally-developed instruments are directly linked to local curriculum and can identify student performance on a set of locally-important criteria. Putting together a local tool, however, is time-consuming as is development of a scoring key/method. There is also no comparison group and performance cannot be compared to state or national norms. Standardized tests are immediately available for administration and, therefore, are less expensive to develop than creating local tests from scratch. Changes in performance can be tracked and compared to norm groups and subjectivity/misinterpretation is reduced. However, standardized measures may not link to local curricula and purchasing the tests can be expensive. Test scores may also not contain enough locally-relevant information to be useful.

*Adapted from the California State University, Bakersfield, PACT Outcomes Assessment Handbook (1999), and the University of Wisconsin, Madison, Outcomes Assessment Manual I (2000).*

## Student Surveys and Exit Interviews

*Description:* Surveys and interviews ask students to respond to a series of questions or statements about their academic experience. Questions can be both open-ended (respondents create answers) and close-ended (respondents answer from a list of simple and unambiguous responses). Surveys and interviews can be written or oral (face-to-face) or phone. Types of surveys include in-class questionnaires, mail questionnaires, telephone questionnaires, and interviews. Interviews include structured, in-person interviews and focus group interviews.

*Strengths and Weaknesses:* Surveys can be relatively inexpensive and easy to administer, can reach participants over a wide area, and are best suited for short and non-sensitive topics. They can give you a sense of what is happening at a given moment in time and can be used to track opinions. Data is reasonably easy to collect and tabulate, yet the sample may not be representative of the population (particularly with a low response rate). Ambiguous, poorly written items and insufficient responses may not generate enough detail for decision making. An interview can follow-up on evasive answers and explore topics in-depth, collecting rich data, new insights, and focused details. It can, however, be difficult to reach the sample and data can be time-consuming to analyze. Information may be distorted by the respondent, who may feel a lack of privacy and anonymity. The success of the interview depends ultimately on the skills of the interviewer.

*Adapted from the California State University, Bakersfield, PACT Outcomes Assessment Handbook (1999), and the University of Wisconsin, Madison, Program Assessment Tool Kit (1998).*

## **Syllabus Analysis**

*Description:* Syllabus analysis (as well as systematic review of textbooks, exams and other curricular material) involves looking at the current course syllabus (written or oral assignments, readings, class discussions/projects and course expectations) to determine if the course is meeting the goals and objectives that the instructor or department has set for it.

*Strengths and Weaknesses:* Use syllabus analysis when you want to clarify learning objectives; explore differences and similarities between sections of a course; or assess the effectiveness of instructional materials. Syllabus analysis can provide invaluable information to enhance any assessment plan. However, this review is time consuming and, as there may be more than one reviewer, there may not be adequate consistency in collecting and analyzing the data.

## **Transcript Analysis**

*Description:* Transcript analysis involves using data from student databases to explore course-taking or grade patterns of students. This tool can give you a picture of students at a certain point in their academic careers, show you what classes students took and in what order, and identify patterns in student grades. In sum, transcript analysis gives you a more complete picture of students' actual curricular experiences. Specific information can be drawn from transcripts to help answer research questions, and course pattern sequences can be examined to see if there is coherence to the order of courses taken.

*Strengths and Weaknesses:* Transcript analysis is an unobtrusive method for data collection using an existing student database. This information can be linked to other variables such as sex or major, or used to measure outcomes. It is important to keep in mind, however, that course patterns may be influenced by other variables in students' lives that don't show up on their transcripts. Also, solutions that arise from results of the analysis may not be practical or easily implemented. It is critical to have specific questions whose answers can lead to realistic change before conducting the analysis.

*Adapted from the California State University, Bakersfield, PACT Outcomes Assessment Handbook (1999), and the Ball State University, Assessment Workbook (1999).*

***Handout #8: Assessment Resources:***

- Allen, Mary J., Assessing Academic Programs in Higher Education, Anker Publishing Company, Inc., 2004
- Allen, Mary J., Assessing General Education Programs, Anker Publishing Company, Inc., 2006
- Anderson, Lorin W. and Krathwohl, David R. (Eds.) with Airasian, Peter W., Cruikshank, Kathleen A., Mayer, Richard E., Pintrich, Paul R., Raths, James, and Wittrock, Merlin C., A Taxonomy for Learning, Teaching, and Assessing: A Revision of Bloom's Taxonomy of Educational Objectives, Addison Wesley Longman, Inc. 2001.
- Bain, Ken, What the Best College Teachers Do, Harvard University Press, 2004
- Banta, Trudy W., Lund, Jon P., Black, Karen E. and Oblander, Frances W., Assessment in Practice: putting principles to work on college campuses by Jossey-Bass, 1996
- Banta, Trudy W. and Associates (editors), Building a Scholarship of Assessment, Jossey-Bass, John Wiley & Sons, 2002
- Bloom, Benjamin S. (Ed.), Englehart, Max D., Furst, Edward J., Hill, Walker H., and Krathwohl, David R., Taxonomy of Educational Objectives, The Classification of Educational Goals, Handbook I: Cognitive Domain, David McKay Company, Inc. New York, 1954, 1956.
- Bransford, John D., Brown, Ann L., and Cocking, Rodney R. (editors), How People Learn; National Research Council Committee on Developments in the Science of Learning; National Academy Press, 1999
- Bresciani, Marilee J., Zelna, Carrie L. and Anderson, James A., Assessing Student Learning and Development: A Handbook for Practitioners, National Association of Student Personnel Administrators (NASPA), 2004
- Brown, George, Bull, Joanna, and Pendlebury, Malcolm, Assessing Student Learning in Higher Education, Routledge, New York, 1997
- Diamond, Robert M., Designing and Assessing Courses & Curricula, Jossey-Bass Inc., 1998
- Driscoll, Amy and Wood, Swarup, Developing Outcomes-based Assessment for Learner-centered Education, Stylus, Sterling, VA. 2007.
- Eder, Douglas J., "General Education Assessment Within the Disciplines", *The Journal of General Education*, Vol. 53, No. 2, pp. 135-157, 2004.
- Erwin, T. Dary, Assessing Student Learning and Development: A Guide to the Principles, Goals, and Methods of Determining College Outcomes, Jossey-Bass Inc., 1991
- Fulks, Janet, "Assessing Student Learning in Community Colleges", Bakersfield College, 2004 obtained at <http://online.bakersfieldcollege.edu/courseassessment/Default.htm>

- Harrow, Anita J., A taxonomy of the psychomotor domain: a guide for developing behavioral objectives, David McKay Company, Inc., 1972
- Hernon, Peter and Dugan, Robert E. (Editors), Outcomes Assessment in Higher Education: Views and Perspectives, Libraries Unlimited, A Member of the Greenwood Publishing Group, Inc., 2004
- Heywood, John, Assessment in Higher Education, Jessica Kingsley Publishers Ltd, London, 2000
- Huba, Mary E. and Freed, Jann E., Learner-Centered Assessment on College Campuses: shifting the focus from teaching to learning, Allyn & Bacon, 2000
- Keeling, Richard P., Wall, Andrew F., Underhile, Ric, and Dungy, Gwendolyn J., Assessment Reconsidered: Institutional Effectiveness for Student Success, International Center for Student Success and Institutional Accountability, 2008.
- Kirkpatrick, Donald L., Evaluating Training Programs: the four levels, 2nd edition, Berrett-Koehler Publishers, Inc., 1998
- Krathwohl, David R., Bloom, Benjamin S., and Masia, Bertram B., Taxonomy of Educational Objectives, The Classification of Educational Goals, Handbook II: Affective Domain, Longman Inc., 1964
- Mager, Robert F., Preparing Instructional Objectives, Fearon Publishers 1962
- Mager, Robert F., Preparing Instructional Objectives: A critical tool in the development of effective instruction 3rd edition, The Center for Effective Performance, Inc. 1997
- Maki, Peggy L., Assessing for Learning: Building a sustainable commitment across the institution, Stylus Publishing, LLC, American Association for Higher Education, 2004
- Pagano, Neil, “Defining Outcomes for Programs and Courses”, June 2005 Higher Learning Commission Workshop Making a Difference in Student Learning: Assessment as a Core Strategy, available at [http://www.ncahigherlearningcommission.org/download/Pagano\\_DefiningOutcomes.pdf](http://www.ncahigherlearningcommission.org/download/Pagano_DefiningOutcomes.pdf)
- Palomba, Catherine A. and Banta, Trudy W., Assessment Essentials: planning, implementing, and improving assessment in higher education, Jossey-Bass, John Wiley & Sons, Inc., 1999
- Pellegrino, James W. , Chudowsky, Naomi and Glaser, Robert (editors); Knowing What Students Know: The science and design of educational assessment, Committee on the Foundations of Assessment, Center for Education, Division of Behavioral and Social Sciences and Education, National Research Council, National Academy Press, 2001
- Prus, Joseph and Johnson, Reid, “A Critical Review of Student Assessment Options”, in *Assessment & Testing Myths and Realities* edited by Trudy H. Bers and Mary L. Mittler, New Directions for Community Colleges, Number 88, Winter 1994, pp. 69-83.

- Stassen, Martha L. A., Doherty, Kathryn, and Poe, Mya, Program-based Review and Assessment: Tools and Techniques for Program Improvement, Office of Academic Planning & Assessment, University of Massachusetts Amherst, 2001.
- Stevens, Dannelle D. and Levi, Antonia J., Introduction to Rubrics: An Assessment Tool to Save Grading Time, Convey Effective Feedback, and Promote Student Learning, Stylus Publishing, 2005
- Suskie, Linda, Assessing Student Learning: A common sense guide, Anker Publishing Company, 2004
- Tagg, John, The Learning Paradigm College, Anker Publishing Company, Inc., 2003
- Terenzini, Patrick T., “Assessment with open eyes: Pitfalls in studying student outcomes.” *Journal of Higher Education*, Vol. 60, No. 6, pp. 644-664, November/December 1989.
- Walvoord, Barbara E. and Anderson, Virginia J., Effective Grading: A Tool for Learning and Assessment, Jossey-Bass, 1998
- Walvoord, Barbara E., Assessment Clear and Simple, John Wiley & Sons, 2004

## ***Assessment Resources by Discipline***

### **Chemistry**

The [American Chemical Society's Division of Chemical Education's Examinations Institute](#) provides information about measuring chemistry learning.

### **Languages**

[American Council on the Teaching of Foreign Languages](#) (ACTFL) provides proficiency guidelines for speaking and writing.

### **Math**

[Supporting Assessment in Undergraduate Mathematics](#) (SAUM)  
[Field Tested Learning Assessment Guide](#) (FLAG) - proven assessment techniques specifically designed for science, mathematics, engineering and technology. This source includes a Primer about strategies and benefits of alternative choices of assessment, a collection of classroom assessment techniques to guide and assess learning, a database of discipline-specific instruments, and resources for assessment.

### **Psychology**

[American Psychological Association](#) (APA)  
[Assessment CyberGuide](#) for Learning Goals and Outcomes in the Undergraduate Psychology Major (APA)

### **Science**

[Field Tested Learning Assessment Guide](#) (FLAG) - proven assessment techniques specifically designed for science, mathematics, engineering and technology. This source includes a Primer about strategies and benefits of alternative choices of assessment, a collection of classroom assessment techniques to guide and assess learning, a database of discipline-specific instruments, and resources for assessment.

Rutgers University Physics and Astronomy Education Research (PAER) group provides the [Scientific Abilities Project](#) examples of rubrics and assessment tasks for scientific abilities.

### **Sciences - Basic and Clinical**

[Constructing Written Test Questions for the Basic and Clinical Sciences](#) This National Board of Medical Examiners resource contains principles key to creating quality test items for objective tests. The length of the document is due to a large number of examples, included along with its explanations and in an Appendix.

### **Sociology**

The American Sociological Association offers this document on [Creating an Effective Assessment Plan for the Sociology Major](#).

## **Technology**

[Field Tested Learning Assessment Guide](#) (FLAG) - proven assessment techniques specifically designed for science, mathematics, engineering and technology. This source includes a Primer about strategies and benefits of alternative choices of assessment, a collection of classroom assessment techniques to guide and assess learning, a database of discipline-specific instruments, and resources for assessment.