

# **Student Learning Outcomes and Instructional Planning**

## **A Work Book**

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## **Overview: Instructional Planning and Student Learning Outcomes**

The new Accreditation Standards require incorporating Student Learning Outcomes into all aspects of the college. Cabrillo faculty must define and assess SLOs (student learning outcomes) for courses, programs and degrees and certificates. When transfer and basics skills departments undergo Instructional Planning, they have three tasks that they must complete to help the college meet the new standards:

- 1) Assess the Core 4. These four college-wide core competencies were identified by the college faculty and approved by the Faculty Senate as Student Learning Outcomes (SLOs) for Cabrillo's Associates Degrees. They are embedded in our General Education pattern and articulate what a student will be able to do after completing the degree.
- 2) Define SLOs for all courses offered by the department.
- 3) Begin the process to annually assess the SLOs in departmental courses.

Additionally, those departments which offer learning labs that serve several courses, such as the Math lab or Writing Center, must also design an assessment process for those labs. The Assessment Coordinator is available to work individually with Program Chairs to assist departments in developing this type of larger lab assessment. Labs that are associated with a single course will be assessed as part of that course.

Occupational Programs have slightly different tasks. They are explained in detail in the **Program SLO Workbook**.

If all this sounds intimidating, don't worry. This workbook will guide you through all the steps necessary for completing these three tasks. The Assessment Coordinator, Marcy Alanraig, is also available to assist your department. Contact her at 479-6366.

**Part I**

**Core 4  
Assessment**

## **6 Steps for Assessing Assessing Cabrillo's College-Wide Competencies**

The Faculty Senate recently defined four college-wide core competencies, which describe what a student can do after completing a degree or a course of instruction in general education or basic skills. These Core 4 competencies describe the big, over-academic tools or ways of thinking and working that a Cabrillo student should develop as a result of spending time at our college.

But how can we be sure that students have mastered these competencies? The Faculty Senate has also developed an assessment process that gives us an exciting way to evaluate how well students are doing, enabling us to improve our teaching and learning. The process, called **course-embedded assessment**, utilizes what we are already doing in the classroom. It has become a new part of Instructional Planning and has six simple steps. All department faculty are expected to participate, along with any classified staff involved in the classroom instruction.

**Step One:** As a department, vote on one of the four Core Competencies that you will assess this semester. Eventually, you will assess all four competencies, one each semester for two years before Instructional Planning begins. Right now, departments going through Instructional Planning are assessing only one or two competencies. If your department is new to this process, choose the competency that most obviously reflects what most of you teach in your classes.

**Step Two:** Think about the major graded assignments that you are giving students this semester. Choose **one** (in only one class) that you feel measures some aspect of the core competency that the department has chosen. Keep it simple. Use an assignment you always give that you feel is important.

**Step Three:** Develop a rubric or grading scale that articulates in words how you grade that assignment. What components compose an A on this assignment? What makes up a B? Define each level. **This may be your only piece of new work.** If you only use exams, identify groups of specific questions on one of your major exams that you feel address the competency. It will be most helpful if there are several questions.

**Step Four:** Give the assignment or exam this semester. Grade it using the rubric you developed in Step Three. If you are using an exam, Scantron machines can analyze the results of the specific questions for you. If that is not appropriate for you, look at how well students did on the specific questions that you identified as addressing the competency. See the section on **Analyzing Test Questions** (page 30) for help on this. Regardless of what assessment method you use, keep a record of the rubric or the questions and the results. The **Recording Assessment Results** form on page 29 in this workbook may be helpful for this step.

**Step Five:** Analyze the results of your assessment and record your thoughts on the **Analyzing Assessment Results** form in the workbook (page 30). During the next Flex Week, meet as a department to share your analysis. Each department member shares the following:

1. The assignment given.
2. The results.
3. Based on the results, describe how you would change or improve the teaching of this assignment. Were you satisfied? What do you need as an instructor to improve your teaching and/or the student learning of the assignment? Improvements can range from specific tweaking of the assignment or the activities leading up to it to the need for more staff development training or new equipment.

At the end of this meeting, discuss what your department needs to improve the teaching and learning of this core competency in general. What do you need from the college?

**Step Six:** Incorporate the needs discovered during Step Five into your Instructional Plan. Base some of your long-term goals and needs on the result of your discussions. Use the **Transfer and Basic Skills Assessment Analysis Form** to record the results of your discussion and append it to your Instructional Plan.

## General Information on Course-Embedded Assessment

**Assessment** is the process used to evaluate how well students have mastered the outcomes of your course, program or the college core competencies. This assessment is used to **evaluate the college, not the students or the instructors**. The point is to look at what is being taught and how well students are learning it. Are improvements needed? What can be done so that students learn more or succeed at higher rates? How can the college help? What do you need as an instructor from your department or the college as a whole to better teach your students.

While the assessment needed for accreditation is not designed to evaluate individual students, it's possible to use assignments or activities from classes as assessments. This **course-embedded assessment** process asks programs to assemble artifacts students have already produced in their courses to evaluate them. Though the artifacts may be already graded in the course by individual instructors, they are also used to "grade" or assess either the course, program or core competency. Faculty analyze the artifacts to see how well the program is helping students to master its program outcomes.

There are three steps to designing assessments:

**Step one:** Decide what tool will best demonstrate the students' mastery of your outcomes. Assessment tools can be:

Portfolios	Classroom observations
Exams (written or oral)	Interviews
Written reports	Papers
Logs or Journals	Performances/demonstrations
Simulated performances	Art works or products

**Step Two:** Define the criteria that will be used to measure the tool. Break the criteria down into specific components. This is called a **rubric**. What are the specific parts of the assessment that students need to master? If you have never created a rubric before, please use the **Creating Rubrics** section of this workbook to help you. If you use multiple choice tests, look at the specific section on **Analyzing Test Questions** in this workbook to help you.

**Step Three:** Define specific levels of quality or proficiency. Faculty must clearly articulate each of the different levels for whatever scoring technique is used. The **Creating Rubrics** section can help you do this in detail if the process is unfamiliar to you.

## Step One:

As a department, vote on one of the four Core Competencies (our college-wide SLOs) that you will assess as part of your instructional plan. If you've never done this before, pick the one that most obviously reflects what most of you teach in your classes. Keep it simple.

This chart may help you. Rate the core competencies listed below on a scale of 1-4 (four being the highest and one the lowest) on its applicability to your department. The next two pages contain a more detailed description of each of the competencies.

<b>1. Communication</b> A. Reading B. Writing C. Listening D. Speaking and/or Conversing	<b>Departmental Applicability</b>
<b>2. Critical Thinking and Information Literacy</b> A. Analysis B. Computation C. Research D. Problem Solving	
<b>3. Global Awareness</b> A. Scientific Complexities B. Social Diversity and Civics C. Artistic Variety	
<b>4. Personal and Professional</b> A. Self-Management and Self-Awareness B. Social and Physical Wellness C. Workplace Skills	

## Core Competency Descriptions

Upon completion of Cabrillo College's General Education program, a student will demonstrate competency in the following areas:

### I. Communication

Students will communicate effectively, which means the ability to:

**A. Read** – Students will be able to comprehend and interpret various types of written information in (1) prose and in (2) documentation, such as manuals and graphs

**B. Write** – Students demonstrate the ability to:

- Communicate thoughts, ideas, information, and messages in writing
- Compose and create documents, such as: letters, reports, memoranda, manuals and graphs with correct grammar, spelling, punctuation, and appropriate language, style, and format
- Check, edit, and revise written work for correct information, appropriate emphasis, form, style, and grammar

**C. Listen**—Students will be able to receive, attend to, interpret, and respond appropriately to (1) verbal and/or (2) nonverbal messages

**D. Speak and/or Converse** – Students have the ability to:

- Organize ideas and communicate verbal, or non-verbal messages appropriate to the audience and the situation
- Participate in conversations, discussions, and group activities
- Speak clearly and ask questions

### II. Critical Thinking and Information Competency

Thinking critically is characterized by the ability to perform:

**A. Analyze** – including:

- Applying rules and principles to new situations
- Discovering rules and applying them in the problem solving process
- Using logic to draw conclusions from information given
- Differentiating between facts, influences, assumptions, and conclusions

**B. Compute** – demonstrated by an ability to:

- Use basic numerical concepts, such as: whole numbers, percentages, estimates of math without a calculator
- Use tables, graphs, charts, and diagrams to explain concepts or ideas
- Use basic geometrical shapes, such as: lines, angles, shapes, and space

**C. Research** – demonstrate abilities to:

- Collect Information
- Identify the need for data
- Obtain data from various sources
- Organize, process, and maintain records of the information collected
- Analyze the information for relevance and accuracy
- Synthesize, evaluate and communicate the results
- Determine which technology resources will produce the desired results

- Use current technology to acquire, organize, analyze, and communicate information

**D. Solve Problems** – Students demonstrate the ability to:

- Recognize whether a problem exists
- Identify components of the problem or issue
- Create a plan of action to resolve the issue
- Monitor, evaluate, and revise when necessary

### **III. Global Awareness**

Students will demonstrate a measurable understanding and appreciation of the world including its:

**A. Scientific complexities** – Students demonstrate an understanding of:

- The scientific method
- How experiments work
- The major differences between social, natural and physical sciences

**B. Social diversity and civics** – Students demonstrate an ability to:

- Interface with people from a variety of backgrounds
- Understand different cultural beliefs and behaviors
- Recognize important social and political issues in their own community

**C. Artistic variety** – Students have been exposed to:

- The visual arts, including: drawing, painting, sculpture, photography and digital media, and/or music of one or many cultures.
- Analytical techniques for understanding the meaning in art, or they have
- Hands-on experience with creative endeavors

### **IV. Personal Responsibility and Professional Development**

**A. Understands and Manages Self** – The student is able to:

- Accurately assess his/her own knowledge, skills, and abilities
- Motivate self and sets realistic goals
- Accept that taking feedback well is important to success
- Respond appropriately to challenging situations

**B. Social and Physical Wellness** – Students make an appropriate effort to:

- Manage personal health and well being
- Demonstrate appropriate social skills in group settings

**C. Workplace Skills** – Students understand the importance of:

- Being dependable, reliable, and accountable
- Meeting deadlines and completing tasks
- Maintaining a professional attitude

## Step Two:

Think about the major graded assignments that you are giving students this semester. Choose one (in only one class) that you feel measures some aspect of the core competency that the department has chosen. Keep it simple. Use an assignment you always give that you feel is important. It only has to address one aspect of the competency.

### Assignment Worksheet: Competency 1

Course: \_\_\_\_\_

<b>Competency: Communication</b>	<b>Exercise Demonstrating Competency</b>
<b>Reading</b>	
<b>Writing</b>	
<b>Listening</b>	
<b>Speaking/ Conversing</b>	

## Step Two:

Think about the major graded assignments that you are giving students this semester. Choose one (in only one class) that you feel measures some aspect of the core competency that the department has chosen. Again, keep it simple. Use an assignment you always give that you feel is important. It only has to address one aspect of the competency.

### Assignment Worksheet: Competency 2

Course: \_\_\_\_\_

<b>Competency: Critical Thinking/ Information Competency</b>	<b>Exercise Demonstrating Competency</b>
<b>Analysis</b>	
<b>Computation</b>	
<b>Research</b>	
<b>Problem Solving</b>	

## Step Two:

Think about the major graded assignments that you are giving students this semester. Choose one (in only one class) that you feel measures some aspect of the core competency that the department has chosen. Again, keep it simple. Use an assignment you always give that you feel is important. It only has to address one aspect of the competency.

### Assignment Worksheet: Competency 3

Course: \_\_\_\_\_

<b>Competency: Global Awareness</b>	<b>Exercise Demonstrating Competency</b>
<b>Scientific Complexities</b>	
<b>Social Diversity and Civics</b>	
<b>Artistic Variety</b>	

## Step Two:

Think about the major graded assignments that you are giving students this semester. Choose one (in only one class) that you feel measures some aspect of the core competency that the department has chosen. Again, keep it simple. Use an assignment you always give that you feel is important. It only has to address one aspect of the competency.

### Assignment Worksheet: Competency 4

Course: \_\_\_\_\_

<b>Competency: Personal Responsibility/ Professional Development</b>	<b>Exercise Demonstrating Competency</b>
<b>Understands and Manages Self</b>	
<b>Adapts Wellness Behavior</b>	
<b>Possesses Workplace Skills</b>	

## Step Three:

Develop a rubric or grading scale that articulates in words how you grade that assignment. What components compose an A on this assignment? What makes up a B? Define each level. This may be your only piece of new work. If you only use exams, skip to the section on **Analyzing Test Questions** for help with this work.

### General Information on Grading Rubrics

A **rubric** translates the standards and criteria that make up grading into some sort of chart or description. Rubrics can be used to score many kinds of written assignments or exams, papers, projects, speeches or portfolios. They are not useful, however, as a grading mechanism for multiple choice or short answer tests.

A rubric answers the question, “What precisely is an A on a particular assignment or project? How is it different from a B or C?” While this is information that many of us carry inside our heads, in order to clearly assess student learning outcomes, it must be articulated in writing. However, it is up to you – the expert in your classroom – to define these standards and criteria and how they will be applied to the class work that you assign. Your rubric will be as individual as your grading style and pedagogy.

There are three steps to creating a rubric:

1. Define the specific components that are key elements to the assignment or project.
2. Delineate specific levels of success for each element.
3. Assemble the elements into a chart or written document.

After you have created a rubric, it’s helpful to share it with another faculty member in your discipline (or better yet, in a different discipline) to check if:

- a) The wording is understandable to a student or novice (watch for an excess of discipline-specific jargon).
- b) The progression of criteria for each level is logical and consistent.

Though the intent of this workbook is to help you develop a rubric that can be used to assess Cabrillo’s core competencies, many Cabrillo faculty have found this grading tool so useful that they have adopted it for general classroom use. You, of course, don’t need to share your rubric with your students, but if you do it may prove helpful. In a survey done in Spring 2003, many Cabrillo Learner Outcomes Summer Institute alumni reported that clear communication resulted from using a rubric. This did not necessarily improve overall grades, but students were more aware of what they’d done and where they needed to improve. As a result, the survey revealed that conflict over grading had significantly lessened!

## Sample Rubrics

### Short Essay Rubric

(Used in my Human Genetics course.)

Score	Content	Organization	Development	Use of Language
5	Answer is appropriate to the question. Content is factually correct.	Clear sense of order. Begins with a thesis or topic sentence. Supporting points are presented in a logical progression.	Develops each point with may specific details. Answers question completely.	Uses technical or scientific terminology appropriately and correctly. No major grammatical or spelling errors.
4	Answer is appropriate to the question. Content may have one or two factual errors.	May lack a thesis sentence, but points are presented in a logical progression.	Each point supported with some details and evidence. All important points included.	Accurate word choice. No more than 2 major errors and a few minor errors.
3	Content relates peripherally to the question; contains significant factual errors.	Logic of argument is minimally perceivable. Points presented in a seemingly random fashion, but all support argument.	Sparse details or evidence. Question only partially answered.	Ordinary word choice; use of scientific terminology avoided. Some serious errors (but they don't impair communication).
2	Content unrelated to question.	Lacks clear organizational plan. Reader is confused.	Statements are unsupported by any detail or explanation. Repetitious, incoherent, illogical development.	Limited vocabulary; errors impair communication.

Developed by Denise Lim, Biology.

## Sample Rubric for Assessing Photographs

### 1. Concept, idea, visualization:

- 10 pts Shows coherency of the concept with a high degree of originality and sophistication. The idea is well stated with visual elements and cues.
- 9 pts Shows coherency of the concept with some originality and sophistication. The idea is stated with visual elements and cues but needs to be more clear or more strongly evident.
- 8 pts Shows some coherency of the concept with commonly used, cliché or stereotyped imagery. The idea is obtuse, and requires greater clarity through the use of visual elements and cues.
- 7 pts Lacks general coherency of the concept. Many of the visual elements and cues do not lead the viewer to the intended idea.
- 6 pts Lacks any coherency of the concept. Visual elements and cues do not lead the viewer to the intended idea.
- 0 pts The work was not presented to me.

### 2. Composition & design:

- 10 pts Shows strong internal integrity of the visual elements. Nothing needs to be added or removed – framing is superb.
- 9 pts Shows internal integrity of the visual elements. A visual element needs to be added, moved or removed – framing needs some slight adjustment.
- 8 pts Shows obvious weaknesses in the internal integrity of the visual elements. Many visual elements need to be added, moved or removed – framing needs definite adjustments.
- 7 pts Image is breaking apart – there is very little internal integrity of the visual elements. Most visual elements need to be rethought – framing needs major readjustment.
- 6 pts Visual integrity is nonexistent and image has broken apart. All of the visual elements need to be rethought – framing needs a complete overhaul.
- 0 pts The work was not presented to me.

### 3. Technical:

- 10 pts Shows master in the use of photographic equipment and techniques to attain the assignment parameters.
- 9 pts Shows a good command of the use of photographic equipment and techniques to attain most of the assignment parameters.
- 8 pts Shows some command of the use of photographic equipment and techniques to attain some of the assignment parameters.
- 7 pts Shows limited command of the use of photographic equipment and techniques to attain a few of the assignment parameters.
- 6 pts Shows little or no command of the use of photographic equipment and techniques to attain a few or none of the assignment parameters.
- 0 pts The work was not presented to me.

Developed by Susan Hoisington, Photography.

# Sample Rubric for Oceanography 10 Lab Project

## Bathymetric Map and Cross Section (Lab #2) Grading Criteria

### An “A” grade (9 or 10 out of 10):

- The contour lines are extremely smooth and evenly spaced with none of them touching each other.
- Every water depth # has the appropriate contour line next to it and the entire map is “contoured”.
- The overall presentation is excellent.
- The cross section is accurate and complete and the bottoms of the canyons and top of the ridge are not flat.
- The ends of the cross section are complete and the paper shows the vertical exaggeration.

### A “B” grade (8 out of 10):

- The contour lines are neat and smooth and appropriately spaced and some are touching, but very few.
- Nearly all the water depth #'s are contoured, some may be missing, but very few.
- The overall presentation is good and very few “shadows” are showing.
- The cross section is accurate, but some information is missing, particularly on the ends.
- Vertical exaggeration may or may not be shown.

### A “C” grade (6 or 7 out of 10):

- The contour lines are a little wide and show fringes, some may have double ends and some of them are obviously touching each other.
- Some of the water depth #'s may not be contoured and the contour lines are all not evenly or properly spaced. There may be shadows on the map and the overall presentation is slightly sloppy.
- The cross section is mostly accurate, but some information is off line and missing, particularly on the ends.
- Vertical exaggeration may not be shown.

### A “D” and “F” grade (5 or less out of 10):

- The contour lines are sloppy and inaccurate and some or many are touching each other.
- Several of the water depth #'s are not accurately contoured and the map is not complete.
- The overall presentation is below or far below average.
- The cross section is inaccurate, and much information is off line and missing.
- Vertical exaggeration may be shown.

Developed by Dave Schwartz, Geology.

## English1A Essay Rubric

### **WOW!!! (90-100 Points - Grade A)**

- Begins with an introduction that shows your understanding of the issues, grabs your readers' attention, and presents a strong and insightful thesis or point of view.
- Engages the topic in a thoughtful and individual way, showing originality, elegance and clear thinking.
- Develops the topic using a strong detail, quotes from other sources, and a unique synthesis of ideas.
- Utilizes library research and quotes from outside sources, always properly citing them using the MLA format.
- Possesses a fully explained and logical progression of ideas that indicates the writer's sensitivity to different ways of looking at the topic with an awareness of key counter arguments and a consideration of how those alternate positions shape your understanding of the topic.
- Ends with a strong conclusion that clarifies the significance of the paper's lessons
- Chooses words aptly and sometimes inventively.
- Demonstrates mastery of most of the grammar and usage conventions of Standard English.
- Uses phrasing, tone, and expression that reflects a unique personal voice.

### **Good! Almost There (80-89 Points - Grade B)**

- Begins with an introduction that shows some understanding of the issues, gives some background and has an adequate thesis or point of view.
- Presents a thoughtful response to the topic, using appropriate reasoning and a partially realized analysis that is accurate.
- Develops the topic showing appropriate details, a sense of orderly progress between ideas, and use of references that reveal a familiarity with the topic.
- Uses words precisely if not creatively.
- Varies sentence structure enough to read smoothly.
- Utilizes library research and quotes from outside sources, usually properly citing them using the MLA format.
- Uses competently the conventions of written English, containing few, if any, errors in sentence structure, punctuation and capitalization or usage.
- Uses mostly consistent phrasing, tone and expression that reflects a personal world view and style.

Developed by Marcy Alan Craig, English. Note grading sheet at the end.

### **Getting there (70-79 Points - Grade C)**

- Presents an adequate response to the topic, using superficial analysis and weak point of view.
- Uses logical reasoning, but the supporting evidence is general and imprecise with few examples. There may be some small factual errors.
- Uses a less precise vocabulary and may contain awkwardness of expression.
- Utilizes library research and quotes from outside sources, with fairly consistent use of the MLA citation format. May make some errors.
- Contains minor errors in mechanics and usage, and perhaps one or two more distracting errors in sentence structure.
- Uses fairly consistent phrasing, tone and expression that reflect a personal world view and style with occasional inconsistencies.

### **Try Again (60-69 Points - Grade D)**

- Responds to the topic illogically, without a coherent structure or focus.
- Has no point of view, uses mostly summary and lacks evidence and support.
- Makes several large, factual errors.
- Makes enough errors in usage and sentence structure to cause a reader serious, if occasional, distraction.
- Improperly uses the MLA format for citations. Makes major errors in quoting and uses few sources.
- Uses frequently inconsistent phrasing, tone and expression, often formulaic and imitative; lacks evidence of a personal worldview and style.

### **Let's not even go there (50-59 Points - Grade F)**

- Doesn't attempt the task or distorts it
- Lacks organization or detail.
- Contains many distracting errors in sentence structure, simplistic or inaccurate word choice, many repeated errors in grammar and usage.
- Not enough is written to get a sense of personal worldview and style.

# English 1A Grading Sheet

## Paper #1-7 Grading Sheet

Name: \_\_\_\_\_

Total Grade: \_\_\_\_\_

This paper is one of the pieces of evidence for Outcomes #3 and 4:

- Use your unique voice to write papers that analyze the ecological, anthropological, historical and literary aspects of the Monterey Bay region.
- Use the library to find information in books, magazines, electronic databases and on-line sources. Incorporate those sources in your writing, acknowledging them using MLA documentation style

Based on the grading scale listed under Grading Requirements, your grade is divided into the elements listed in the chart below.

Elements of Grade	Wow!	Good	Getting There	Try Again	Let's Not Go There
<b>Introduction</b>					
<b>Thesis or Claim</b>					
<b>Response to Topic</b>					
<b>Evidence to support thesis</b>					
<b>MLA citation and documentation</b>					
<b>Awareness of counter arguments</b>					
<b>Flow and order of Ideas</b>					
<b>Conclusion</b>					
<b>Word Choice</b>					
<b>Grammar and Punctuation</b>					
<b>Personal Voice</b>					

Comments:

## Creating Rubrics Worksheet 1

<b>Course Name and Number</b>	
<b>Core Competency</b>	
<b>Assessment Tool/Assignment</b>	
<b>Assignment Components</b>	
1.	2.
3.	4.
5.	6.
7.	8.

## Creating Rubrics Worksheet 2

Articulate your standards for each component

Score: <b>A</b>	Write a sentence that describes the component at this level. Be as specific as possible.
Component 1:	
Component 2:	
Component 3:	
Component 4:	
Component 5:	
Component 6:	
Component 7:	
Component 8:	

## Creating Rubrics Worksheet 2

Articulate your standards for each component

Score: <b>B</b>	Write a sentence that describes the component at this level. Be as specific as possible.
Component 1:	
Component 2:	
Component 3:	
Component 4:	
Component 5:	
Component 6:	
Component 7:	
Component 8:	

## Creating Rubrics Worksheet 2

Articulate your standards for each component

Score: <b>C</b>	Write a sentence that describes the component at this level. Be as specific as possible.
Component 1:	
Component 2:	
Component 3:	
Component 4:	
Component 5:	
Component 6:	
Component 7:	
Component 8:	

## Creating Rubrics Worksheet 2

Articulate your standards for each component

Score: <b>D</b>	Write a sentence that describes the component at this level. Be as specific as possible.
Component 1:	
Component 2:	
Component 3:	
Component 4:	
Component 5:	
Component 6:	
Component 7:	
Component 8:	

## Creating Rubrics Worksheet 2

Articulate your standards for each component

Score: <b>F</b>	Write a sentence that describes the component at this level. Be as specific as possible.
Component 1:	
Component 2:	
Component 3:	
Component 4:	
Component 5:	
Component 6:	
Component 7:	
Component 8:	

## Analyzing Test Questions

If you assess student learning in your courses through multiple choice exams, it's possible to analyze the questions in your tests to assess how well students are mastering any of the core competencies. The first two steps help you to analyze your questions. Step Four describes how to use campus scoring machines to help you complete your analysis. This particular method was developed by Paul Harvell, in Economics. You may find another approach works better for you. If so, please contact the Assessment Coordinator and describe what you do, so she can share it with others.

**Step One:** Identify the questions on the test which you feel address the Core competency that you are assessing. There should be several questions throughout an exam that you feel require students to demonstrate mastery of the specific competency.

**Step Two:** Deepen your analysis of the questions by further categorizing them. A way to do this is offered in *Effective Grading*, by Walvoord and Anderson, page 87, created by Patricia Schlecht of Raymond Walters College in Ohio.

Level A: Those that require higher critical thinking, including analysis, synthesis or evaluation. For these questions, there may be no directly visible connection between the course material and the test question.

Level B: Those that require lower critical thinking skills, such as application. These questions can be directly answered from the background provided by course materials. There is a visible connection between the material and the test questions.

Level C: Those that utilize knowledge and comprehension, but not critical thinking. The answers to these questions arise directly from the course material, with some changes in wording and phrasing.

**Step Three:** Grade the entire exam as you do usually. If you use Scantron or any other campus scoring machines, program it with the key to your entire exam.

**Step Four:** Create a second key that only scores the answers to the questions that you have identified as addressing the core competency. Ask the machine to give you a summary that reports how many students missed each question.

**Step Five:** Analyze the results, looking at how many students missed what level of question. Are you pleased or satisfied with how they did? Is there anything you could do differently to try to ensure that more students answer the questions correctly? In other words, how well do you think students are demonstrating mastery of the competency in your exam? Use the forms on pages 29 and 30 to record your thoughts.

**Step Six:** Report your assessment results and analysis in your department during Flex.

### Step Three Summary Worksheet (Optional)

<b>Department</b>	
<b>Course</b>	
<b>Competency</b>	
<b>Assessment Tool</b>	
<b>Rubric or Measure for Assessment (What are the criteria what will be considered in evaluating the tool?)</b>	
<b>Scoring Technique (What is each level of quality?)</b>	

### Step Four:

Give the assignment this semester. Grade it using the rubric you developed in Step Three. Keep a record of the rubric. Record the grades your students receive on the sheet below. **This is for your information only** and does not specifically need to be shared with colleagues during your department meeting. You can generalize your results instead or use numbers instead of grades (A= 4 points etc). Remember that this assessment process can't be used to evaluate you personally or specific students. The point is to evaluate how students are mastering the core competencies.

<b>Department</b>	
<b>Course</b>	
<b>Competency</b>	
<b>Assessment Tool/ Assignment</b>	
<b>Number of A grades</b>	
<b>Number of B grades</b>	
<b>Number of C grades</b>	
<b>Number of D grades</b>	
<b>Number of F grades</b>	
<b>Any factors that you feel may have affected the grades</b>	

### Step Five:

Analyze the results of your assignment/assessment using the form below. During the Flex Week, meet as a department to share your analysis. Each department member must share the following:

1. The assignment given.
2. The results.
3. Based on the results, describe how you would change or improve the teaching of this assignment. Were you satisfied with the results? What do you need as an instructor to improve your teaching and/or the student learning of the assignment? Improvements can range from specific tweaking of the assignment or the activities leading up to it to the need for more staff development training or new equipment.

At the end of this meeting, discuss what your department needs to improve the teaching and learning of this core competency in general. What do you need from the college? Record the results of this discussion on the **Transfer and Basic Skills Assessment Analysis Form**.

Use the form below to summarize your analysis of your individual assessment.

<b>Department</b>	
<b>Course</b>	
<b>Competency</b>	
<b>Assessment Tool</b>	
<b>Assessment Results</b>	

<p><b>Next Step in the Classroom to Improve Student Learning (check all that apply)</b></p>	<ul style="list-style-type: none"> <li>○ State goals or objectives of assignment/activity more explicitly</li> <li>○ Revise content of assignment/activities</li> <li>○ Revise the amount of writing/oral/visual/clinical or similar work</li> <li>○ Revise activities leading up to and/or supporting assignment/activities</li> <li>○ Increase in-class discussions and activities</li> <li>○ Increase student collaboration and/or peer review</li> <li>○ Provide more frequent or fuller feedback on student progress</li> <li>○ Increase guidance for students as they work on assignments</li> <li>○ Use methods of questions that encourage competency</li> <li>○ State criteria for grading more explicitly</li> <li>○ Increase interaction with students outside of class</li> <li>○ Ask a colleague to critique assignments/activities</li> <li>○ Collect more data</li> <li>○ Nothing; assessment indicates no improvement necessary</li> <li>○ Other (please describe)</li> </ul>
<p><b>Next Step in the Department to Improve Student Learning (check all that apply)</b></p>	<ul style="list-style-type: none"> <li>○ Offer/encourage attendance at seminars, workshops or discussion groups about teaching methods</li> <li>○ Consult teaching and learning experts about teaching methods</li> <li>○ Encourage faculty to share activities that foster competency</li> <li>○ Write collaborative grants to fund departmental projects to improve teaching</li> <li>○ Prove articles/books on teaching about competency</li> <li>○ Visit classrooms to provide feedback (mentoring)</li> <li>○ Create bibliography of resource material</li> <li>○ Have binder available for rubrics and results</li> <li>○ Analyze course curriculum to determine that competency skills are taught, so that the department can build a progression of skills as students advance through courses</li> <li>○ Nothing; assessments indicate no improvements necessary</li> <li>○ Other (please describe)</li> </ul>

## **Transfer and Basic Skills Assessment Analysis Form**

Use the form below to summarize the results of the department meeting in which you discussed the core competency assessment process. Append this form to your Instructional Plan and incorporate the results into the narrative of your instructional plan.

<b>Department</b>	
<b>Meeting Date</b>	
<b>Number of Faculty/Staff in Attendance</b>	
<b>Number of Faculty/Staff sharing Assessment Results</b>	
<b>Core Competency Measured</b>	
<b>Assessment Tools</b> (Give examples of major assignments your faculty/staff used to measure the competency)	
<b>Assessment Results</b> (Summarize the overall results of your department)	

<p><b>Next Step in the Classroom to Improve Student Learning</b></p> <p>(check all the items faculty/staff felt would help them improve student learning)</p>	<ul style="list-style-type: none"> <li>○ State goals or objectives of assignment/activity more explicitly</li> <li>○ Revise content of assignment/activities</li> <li>○ Revise the amount of writing/oral/visual/clinical or similar work</li> <li>○ Revise activities leading up to and/or supporting assignment/activities</li> <li>○ Increase in-class discussions and activities</li> <li>○ Increase student collaboration and/or peer review</li> <li>○ Provide more frequent or more comprehensive feedback on student progress</li> <li>○ Increase guidance for students as they work on assignments</li> <li>○ Use methods of questioning that encourage the competency you measured</li> <li>○ State criteria for grading more explicitly</li> <li>○ As an instructor, increase your interaction with students outside of class</li> <li>○ Ask a colleague to critique assignments/activities</li> <li>○ Collect more data</li> <li>○ Nothing; assessment indicates no improvement necessary</li> <li>○ Other (please describe)</li> </ul>
<p><b>Next Step in the Department to Improve Student Learning</b></p> <p>(check all that the department felt would help them improve student learning)</p>	<ul style="list-style-type: none"> <li>○ Offer/encourage attendance at seminars, workshops or discussion groups about teaching methods</li> <li>○ Consult teaching and learning experts about teaching methods</li> <li>○ Encourage faculty to share activities that foster competency</li> <li>○ Write collaborative grants to fund departmental projects to improve teaching</li> <li>○ Purchase articles/books on teaching about competency</li> <li>○ Visit classrooms to provide feedback (mentoring)</li> <li>○ Create bibliography of resource material</li> <li>○ Have binder available for rubrics and results</li> <li>○ Analyze course curriculum to determine that competency skills are taught, so that the department can build a progression of skills as students advance through courses</li> <li>○ Nothing; assessments indicate no improvements necessary</li> <li>○ Other (please describe)</li> </ul>

<p><b>Priorities to Improve Student Learning</b></p> <p>(List the top 3-6 things faculty/staff felt would <u>most</u> improve student learning)</p>	
<p><b>Implementation</b></p> <p>(List the departmental plans to implement these priorities)</p>	
<p><b>Timeline for Implementation</b></p> <p>(Make a timeline for implementation of your top priorities)</p>	

# **Part II**

# **Writing SLOs for Departmental Courses**

**Overview**

The second task that departments going through Instructional Planning must undertake is to write SLOs for departmental courses. The Instructional Planning process requires departments to evaluate all of their courses and revise them if necessary. This time, however, **each and every course** must be revised to include SLOs. This section of the workbook will guide you through that process.

So what exactly **is** a Student Learning Outcome? In the new Accreditation standards, a Student Learning Outcome (SLO) describes the:

- ❑ knowledge
- ❑ skills
- ❑ abilities
- ❑ attitudes

that students have attained by the end of any set of college experiences – classes, occupational programs, degrees and certificates and even encounters with Student Services or the Library. The stress is on what students can **DO** with what they have learned, resulting in some sort of product that can be evaluated.

You have just learned how to assess the Cabrillo's college wide SLOs, or Core Competencies, using a course-embedded assessment process. This process will also be used to assess the SLOs in your departmental courses, but first you must write them. The Faculty Senate created the Core 4 for you. Now, it's your turn to embark on this task, revising each course outline of every class your department offers to include SLOs..

The course outline forms on Fiesta contain two new sections that deal with SLOs. The first asks you to check boxes to identify which of the Core 4 competencies your course addresses. Every course should address at least one. Most will address more than one, sometimes all four.

The second section asks you to write SLOs for your course. The material contained in this section of the workbook is the same as the link on Fiesta to help you write those SLOs and to distinguish them from course objectives. Once you've revised the course to include SLOs, it must go through the regular curriculum approval process.

When the revised courses are approved by the Curriculum Committee, the new Accreditation Standards ask that course SLOs are listed on every syllabus. It's crucial that faculty include those SLOs on the syllabi for every course that they teach.

## SLOs versus Course Objectives

A Student Learning Outcome is **different** from a course objective. SLOs for the classroom describe the knowledge, skills, abilities or attitudes that a student can **demonstrate** by the end of your course. Most courses would include 3-6 major SLOs.

- ❑ Don't think about content or coverage - consider what students should be able to DO with what they've learned by the end of the semester.
- ❑ How will students demonstrate this?
- ❑ What can they produce to show faculty that they can apply their new knowledge?

When trying to define Student Learning Outcomes for a course, think of the big picture. SLOs:

- ❑ Describe the broadest goals for the class, ones that require **higher-level** thinking abilities.
- ❑ Require students to **synthesize** many discreet skills or areas of content.
- ❑ Ask them to then **produce** something - papers, projects, portfolios, demonstrations, performances, art works, exams etc. – that **applies** what they have learned.
- ❑ Require faculty to **evaluate** or **assess** the product to measure a student's achievement or mastery of the outcomes.

Course objectives are on smaller scale, describing small, discreet skills or “nuts and bolts” that require basic thinking skills. They are subsets of outcomes. Think of objectives as the building blocks used to produce whatever is used to demonstrate mastery of an outcome. Objectives can be practiced and assessed individually, but are usually only a portion of an overall project or application.

<b>Objectives</b>	<b>Outcomes</b>
Objectives describe skills, tools or content that a student will master by the end of course.	Outcomes describe over-arching goals that a student will be able to demonstrate by the end of a course.
Objectives require the use of basic thinking skills such as knowledge, comprehension and application.	Outcomes require the use of higher level thinking skills such as analysis, synthesis and evaluation.
Objectives do not necessarily result in a product. Most often, objectives are synthesized or combined to produce something that measures an outcome.	Outcomes result in a product that can be measured and assessed.

Are you still confused? Look at the following three pages for examples of the difference between outcomes and objectives describing the knowledge, skills and abilities, and attitudes in a course. Note that there is a flow, a line of progression from the most basic objectives to the most sophisticated outcomes. The charts are adapted from the work of Janet Fulks and Kate Pluta from Bakersfield College. To help you write a course outline, they have noted the words from Bloom's Taxonomy that can be used to describe either an objective or outcome.



# Knowledge

## Objectives

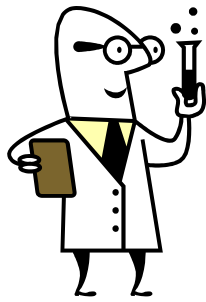
Basic  
Knowledge

## Outcomes

More Sophisticated  
Higher Level Thinking



Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation
Student remembers or recognizes information or specifics as communicated with little personal assimilation.	Student grasps the meaning behind the information and interprets, translates, or comprehends the information.	Student uses information to relate and apply it to a new situation with minimal instructor input.	Student discriminates, organizes, and scrutinizes assumptions in an attempt to identify evidence for a conclusion.	Student creatively applies knowledge and analysis to integrate concepts or construct an overall theory.	Student judges or evaluates information based upon standards and criteria, values and opinions.
Cite Label List Enumerate Identify Imitate Match Name Quote Recall Reproduce State Write	Convert Define Describe Discuss Estimate Explain Generalize Identify Illustrate Locate Paraphrase Restate Summarize	Apply Chart Compute Demonstrate Determine Dramatize Establish Make Manipulate Prepare Project Solve Use	Analyze Compare Contrast Correlate Diagram Dissect Differentiate Distinguish Infer Investigate Limit Outline Separate	Assemble Create Construct Design Develop Formulate Generate Hypothesize Initiate Invent Modify Reframe Synthesize	Access Appraise Conclude Critique Decide Defend Diagnose Evaluate Judge Justify Rank Recommend Support



# Skills and Abilities

## Objectives

Basic Knowledge  
Basic Skills  
Level

## Outcomes

More Sophisticated Skills  
Higher Level Abilities  
Critical Understanding of Performance



Observe	Model	Recognize Standards	Correct	Apply	Coach
Students translate sensory input into physical tasks or activities.	Students are able to replicate a fundamental skill or task.	Students recognize standards or criteria important to perform a skill or task correctly.	Students use standards to evaluate their own performances and make corrections.	Students apply this skill to real life situations.	Students are able to instruct or train others to perform this skill in other situations.
Hear Identify Observe See Smell Taste Touch Watch  *Usually no outcomes or objectives written at this level.	Attempt Copy Follow Imitate Mimic Model Reenact Repeat Reproduce Show Try	Check Detect Discriminate Differentiate Distinguish Notice Perceive Recognize Select	Adapt Adjust Alter Change Correct Customize Develop Improve Manipulate Modify Practice Revise	Build Compose Construct Create Design Originate Produce	Demonstrate Exhibit Illustrate Instruct Teach Train



# Attitudes

## Objectives

Elementary Values and Behaviors  
 Inherited Value System  
 Egocentric View

## Outcomes

More Highly Developed Attitudes  
 Well Thought-out Value System  
 Higher Level Abilities to Identify and  
 Articulate Others' Values

Receiving	Responding	Valuing	Organizing	Characterizing
Students become aware of an attitude, behavior, or value.	Students exhibit a reaction or change as a result of exposure to an attitude, behavior, or value.	Students recognize value and display this through involvement or commitment.	Students determine a new value or behavior as important or a priority.	Students integrate consistent behavior as a naturalized value in spite of discomfort or cost. The value is recognized as a part of the person's character.
Accept Attend Describe Explain Locate Observe Realize Receive Recognize	Behave Comply Cooperate Discuss Examine Follow Model Present Respond Show Studies	Accept Adapt Balance Choose Differentiate Defend Influence Prefer Recognize Seek Value	Adapt Adjust Alter Change Customize Develop Improve Manipulate Modify Practice Revise	Authenticate Characterize Defend Display Embody Habituate Internalize Produce Represent Validate Verify

## Sample Student Learning Outcomes

Here are sample outcomes developed by Cabrillo faculty. Note the verbs used and how they reflect higher level thinking skills, thus making them SLOs rather than objectives.

**BIOLOGY:** **Apply** concepts of chemistry to physiological systems.

**CRIMINAL JUSTICE:** Describe the principles of community-based policing and **apply** them to given situations.

**SPEECH:** Organize, outline and **deliver** well-researched speeches to inform and persuade that are tailored to a specific audience.

**DENTAL HYGIENE:** **Demonstrate** technique of soft-tissue curettage on appropriate clinic patients.

**HISTORY:** **Evaluate** historical myths, clichés and prejudices that permeate contemporary US culture.

**PHOTOGRAPHY:** Manually operate a 35 mm camera to **create** original photographs **applying** principles of exposure and development of black and white photographic films and papers with concepts of composition and design, aesthetics and content.

**ENGLISH:** Use your unique voice to write papers that **analyze** the ecological, anthropological, historical and literary aspects of the Monterey Bay region.

**PIANO:** Sit at the keyboard so that the body will rest on its frame in such a way to be able to use one's hands, arms and fingers to **produce** a beautiful tone with great speed and evenness.

## Guide to Writing SLOs

Beginning is often the most difficult step. Remember that you have been doing this all along. Now is your chance to put what you know intuitively as a professional into words. Use the Worksheet below and:

- 1) In one sentence, describe one major piece of knowledge, skill, ability or attitude that a student will have gained by the end of your class. Describe what students will do -- not content, activities or hours.
- 2) Use action verbs. See the previous pages for examples.
- 3) Write it in language that a student will understand.
- 4) Make sure that the outcome is something that can be assessed or tested.
- 5) Hint: Sometimes it's easier to start backwards by thinking about the major assessments you use in the course. These would be the products or demonstrations of your outcomes. Make a list of your major assignments for this course. Then try to describe in one sentence what the students are being asked to demonstrate in those assignment.
- 6) A word of warning: Be careful when describing attitudes in a learning outcome. They are hard to assess. Ask yourself if the attitude is crucial to success in your course. If a student doesn't have a certain attitude, but possesses the knowledge and skills being taught, is that satisfactory? There were unresolved ethical and pedagogical issues that arose for Cabrillo faculty at the Summer Learner Outcomes Institutes when we discussed assessing students about attitudes (For a more developed discussion, see the Learner Outcomes Institute Toolkit, which you will find as a link on Cabrillo's assessment website at: [www.cabrillo.edu/services/pro/assess/assess.html](http://www.cabrillo.edu/services/pro/assess/assess.html)).
- 7) For most courses, you should have 3-6 SLOs. Remember, they are the major skills a student will be able to demonstrate. Save the smaller ones for course objectives.

## Writing Student Learning Outcomes Worksheet

Course Name and Number \_\_\_\_\_

<b>Outcome</b> 1 sentence that describes a major piece of knowledge, skill, ability or attitude that students can demonstrate by the end of the course	<b>Assessment</b> Major Assignment, Project or test used to demonstrate or apply outcome

<b>Outcome</b> 1 sentence that describes a major piece of knowledge, skill, ability or attitude that students can demonstrate by the end of the course	<b>Assessment</b> Major Assignment, Project or test used to demonstrate or apply outcome

## Checklist for Writing Student Learning Outcomes

Now that you've written your SLOs, it's best to show them to other faculty in both your discipline and outside it to see if what you've written is understandable and concise. Use the following checklist:

1. Have you used action verbs in describing your SLOs?
2. Is it written as an outcome rather than objective?
  - Language indicates the BIG PICTURE rather than nuts and bolts
  - Describes what students can DO
  - Asks students to apply what they've learned by producing something
  - Addresses student competency rather than content coverage
3. Is the SLO appropriate for the course?
  - Represents a fundamental result of the course
  - Aligns with other courses in a sequence, if applicable
  - Represents collegiate level work

## Revised Student Learning Outcomes Worksheet

Use the chart below to revise any of the SLOs you created earlier.

Course Name and Number \_\_\_\_\_

<b>Outcome</b> 1 sentence that describes a major piece of knowledge, skill, ability or attitude that students can demonstrate by the end of the course	<b>Assessment</b> Major Assignment, Project or test used to demonstrate or apply outcome

<b>Outcome</b> 1 sentence that describes a major piece of knowledge, skill, ability or attitude that students can demonstrate by the end of the course	<b>Assessment</b> Major Assignment, Project or test used to demonstrate or apply outcome

# **Part III**

# **Assessing Course SLOs**

**Mapping the Process**

The same course embedded assessment process that was used to assess the Core 4 will also be used to assess course SLOs. This first time, while departments are defining SLOs for each course and assessing the core 4, this course SLO assessment process does not need to begin until after the Instructional Plan is written. After that, it should occur on a yearly basis. When your department once again embarks on Instructional Planning, faculty can use the same assignment from a course to assess both a core competency and a course SLO.

The process of assessing a course SLO is as follows:

**Step One:** Chose **one** course SLO from one class that you are teaching that semester.

**Step Two:** Chose one major graded assignment that you feel measures some aspect of the course SLO. It should be an assignment you always give that you feel is important.

**Step Three:** Develop a rubric or grading scale that articulates in words how you grade that assignment. If you only use exams, identify groups of specific questions on one of your major exams that you feel address the competency. It will be most helpful if there are several questions.

**Step Four:** Give the assignment or exam this semester. Grade it using the rubric you developed in Step Three. If you are using an exam, use Scantron machines to analyze the results of the specific questions. Keep a record of the rubric or the questions and the results, using the **Recording Assessment Results** form on page 29 in this workbook.

**Step Five:** Analyze the results of your assessment and record your thoughts on the **Analyzing Assessment Results** form in the workbook (page 30). During the next Flex Week, meet as a department to share your analysis. Each department member shares the following:

- 1) The assignment given.
- 2) The results.
- 3) Based on the results, describe how you would change or improve the teaching of this assignment. Were you satisfied? What do you need as an instructor to improve your teaching and/or the student learning of the assignment?

At the end of this meeting, discuss what your department needs to improve the teaching and learning in department courses in general. What do you need from the college?