

Glendale Community College
STUDENT LEARNING OUTCOMES & CORE COMPETENCIES WORKSHEET

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Course or Program: Chemistry

Semester: Fall 2011

Division/Department: Chemistry/Physical Science

Directions: *This model is suggested, but not mandatory:*

Column 1. Write one SLO in each row (samples on page 2). Use action verbs (samples on page 3). In most cases, 3-6 SLOs are recommended.

Column 2. Write your measurement method(s) and progress indicator(s) in each row for each SLO.

Column 3. Using the list of Core Competencies (Institutional Learning Outcomes) on pages 4 & 5, list each of the Core Competencies addressed by each SLO in each row.

Column 4. Choosing from the list of "Expected Exit Levels" of Competency (below), write the appropriate overall level for each SLO.

1 = Knowledge	2 = Comprehension	3 = Application	4 = Analysis	5 = Synthesis	6 = Evaluation
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Student Learning Outcome	Assessment Method(s) and/or Progress Indicator(s)	Core Competency (or Competencies)	Expected Exit Level
Upon completion of the program, the student will be able to:			
1. Transfer to a university level institution to complete their degree.	Percentage of students successful in transferring.		
2. Excel in their major field of study.	Survey students.		
3. Students are successful in obtaining their degree.	Through Calpass or other organization.		

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Sample SLOs

1 = Knowledge	2 = Comprehension	3 = Application	4 = Analysis	5 = Synthesis	6 = Evaluation
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Student Learning Outcome	Assessment Method(s) / Progress Indicator(s)	Core Competency (or Competencies)	Expected Exit Level
<u>Women's History class:</u> A student will be able to compare and contrast the issues that led women to challenge the status quo in three different eras in the twentieth century.	Writing assignments, Research projects, Short answer quizzes and tests, Essay question tests.	1 a, b 3 a, b, c, d 4 a, b, c, e 5 b, d, f	6
<u>Intro to Word Proc for Students with Visual Impairments:</u> Student will demonstrate the ability to <u>independently</u> create, save, modify and print a document using a word processing program and appropriate assistive technology.	Lab assignments, Skills demonstrations, Midterm and Final projects.	1 a, b 3 b, c 7 a	3

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Student Learning Objectives (SLO)

Action Verb List

ENMU Academics Special Programs Assessment Resource Office Faculty Assessment Assessment Manual
Action Verb List

Assessment Manual Suggested Verbs to Use in Each Level of Thinking Skills

Below are terms (verbs) that can be used when creating student learning outcomes for a course or degree program.

Knowledge

Count
Define
Describe
Draw
Identify
Labels
List
Match
Name
Outlines
Point
Quote
Read
Recall
Recite
Recognize
Record
Repeat
Reproduces
Selects
State
Write
Use

Comprehension

Associate
Compute
Convert
Defend
Discuss
Distinguish
Estimate
Explain
Extend
Extrapolate
Generalize
Give examples
Infer
Paraphrase
Predict
Rewrite
Summarize

Application

Add
Apply
Calculate
Change
Classify
Complete
Compute
Demonstrate
Discover
Divide
Examine
Graph
Interpolate
Manipulate
Modify
Operate
Prepare
Produce
Show
Solve
Subtract
Translate

Analysis

Analyze
Arrange
Breakdown
Combine
Design
Detect
Develop
Diagram
Differentiate
Discriminate
Illustrate
Infer
Outline
Point out
Relate
Select
Separate
Subdivide
Utilize

Synthesis

Categorize
Combine
Compile
Compose
Create
Drive
Design
Devise
Explain
Generate
Group
Integrate
Modify
Order
Organize
Plan
Prescribe
Propose
Rearrange
Reconstruct
Related
Reorganize
Revise

Evaluation

Appraise
Assess
Compare
Conclude
Contrast
Criticize
Critique
Determine
Grade
Interpret
Judge
Justify
Measure
Rank
Rate
Support
Test

Source:

http://www.enmu.edu/academics/excellence/assessment/faculty/manual/verb_list.shtml (10/9/2006)

GCC CORE COMPETENCIES (*Institutional Learning Outcomes*)

1) Communication

- a) Reading
- b) Writing
- c) Listening
- d) Speaking and/or Conversing and/or Debating
- e) Interpersonal Interactions

Definition: Learners express themselves clearly and concisely to others in logical, well-organized papers and/or verbal presentations using documentation and quantitative tools when appropriate. Learners listen, understand, debate, and use information communicated by others.

2) Mathematical Competency/Quantitative Reasoning

- a) Interpret and Construct Mathematical Models
- b) Solve Problems Using Quantitative Models
- c) Construct Arguments Using Numerical/Statistical Support

Definition: Learners understand, interpret, and manipulate numeric or symbolic information; solve problems by selecting and applying appropriate quantitative methods such as arithmetic, quantitative reasoning, estimation, measurement, probability, statistics, algebra, geometry and trigonometry; and present information and construct arguments with the use of numerical and/or statistical support.

3) Information Competency

- a) Research Strategies
- b) Information Location/Retrieval
- c) Evaluation of Information
- d) Ethical & Legal Use of Information

Definition: Learners recognize the need for information and define a research topic; select, access, and use appropriate sources to obtain relevant data; evaluate sources for reliability and accuracy; and use information in an ethical and legal manner.

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4) Critical Thinking

- a) Evaluation
- b) Analysis and/or Synthesis
- c) Interpretation and/or Inference
- d) Problem Solving
- e) Construct and/or Deconstruct Arguments

Definition: Learners evaluate the credibility and significance of information, effectively interpret, analyze, synthesize explain, and infer concepts and ideas; solve problems and make decisions; and construct and deconstruct arguments.

5) Global Awareness and Appreciation:

- a) Scientific Complexities
- b) Social and Cultural Diversity
- c) Artistic Expression and Variety
- d) Ethical Reasoning
- e) Environmental Issues
- f) Politics

Definition: Learners recognize and analyze the interconnectedness of global, national, and local concerns, analyzing cultural, political, social and environmental issues from multiple perspectives; they recognize the interdependence of the global environment and humanity.

6) Personal Responsibility

- a) Self Management
- b) Self Awareness
- c) Physical Wellness
- d) Study Skills

Definition: Learners demonstrate an understanding of the consequences, both positive and negative, of their own actions; set personal, academic and career goals; and seek and utilize the appropriate resources to reach such goals.

7) Application of Knowledge

- a) Computer Skills
- b) Technical Skills
- c) Workplace Skills
- d) Lifelong Learning

Definition: Learners maintain, improve and transfer academic and technical skills to the workplace; demonstrate life-long learning skills by having the ability to acquire and employ new knowledge; and set goals and devise strategies for personal and professional development.