

Critical Capacities and Skills – (CCS 1) – Problem Solving

Description:

“Students will demonstrate the ability to raise vital questions and problems, formulating them clearly and precisely.”

Intended Learning Outcomes:

Students will demonstrate:

1. the ability to state a problem/question.
2. the ability to determine solutions associated with the problem/question.
3. the ability to evaluate evidence associated with the solutions.
4. the ability to select and defend the best solution for the problem/question.

Course Guidelines:

1. The course must provide students with an assignment that requires use of problem solving to produce the product for the assignment.
2. The course must provide students with an assignment that requires students to create and implement strategies to solve a problem, with assessment of the assignment focusing on the problem solving process rather than on an end product.
3. Potential assessment tools to demonstrate evidence for individual thinking associated with the process/steps of the problem solving task include (these may not be an exhaustive list of options; these are options included as recommendations by AAC&U).
 - a. individual student reflection for all steps of problem solving.
 - b. steps in a problem-based learning assignment.
 - c. record (audio or visual) of think-aloud protocol while problem solving.

Application for Inclusion in the General Education Curriculum

Area: CCS1 Problem Solving

Course:

Contact Person

Proposing Department:

Attach to this form the following:

- 1. Core syllabus *common to all sections of the proposed course.***
2. Narrative that explain how the proposed course addresses the description, learning outcomes, and course guidelines.
3. Description of a specific student work product/assignment common to all sections of the proposed course that can be evaluated to determine a student's mastery of the learning outcomes.

Area specific details:

Problem solving requires that students will demonstrate the ability to raise vital questions and problems, formulating them clearly and precisely.

Assessment Rubrics for CCS 1:

Problem Solving Skill	Advanced (4)	Sufficient (3)	Basic (2)	Insufficient (1)
<i>Problem Statement:</i> specify nature of problem and notice if problem changes	Clearly and succinctly identifies and defines factors associated with the problem/question and clearly state possible relationships associated with problem.	Able to identify multiple factors, good ability to define those factors and state relationships associated with problem/question.	Ability to identify one or two factors, difficulty defining the factors associated with problem/question and minimal ability to state the relationship of the factors.	Minimal ability to identify, define and state relations for one or two factors associated with problem/question.
<i>Determination of Alternative Problem Solutions:</i> propose and test multiple solutions for the specified problem	Two or more solutions proposed and all solutions are relevant for the problem context.	Two or more solutions proposed and solutions proposed are not all consistent with problem context.	Single solution proposed and solution fits problem context.	Single solution proposed; quality of solution difficult to assess for one or more of the following reasons: vague statement, statement indirectly relates to context for problem, statement does not include factors identified for the problem
<p>Factors associated with <i>Evaluation of Evidence</i> for proposed solutions and <i>Selection of Problem Solution</i></p> <ol style="list-style-type: none"> 1. Problem history 2. Sources analyzed using logic/reason 3. Develops alternative solutions to problem 4. Evaluates feasibility of each solution 				
<i>Evaluation of Evidence for Problem Solution Alternatives:</i> evaluation and selection	Evaluation of evidence and possible solutions demonstrates deep understanding and insight among factors associated with solutions.	Evaluation of evidence and possible solutions thorough and minimal insight among factors associated with solutions.	Evaluation of evidence and possible solutions brief and limited insight among factors associated with solutions.	Evaluation of evidence for proposed solutions is superficial and demonstrates no insight among factors associated with solutions.
<i>Selection of Problem Solution:</i> Defense of Proposed Solution	Defense of selected problem solution effectively integrates use of interactions between two or more of the factor areas	Defense of selected problem solution demonstrates some consistent use of at least two of the factor areas	Defense of chosen solution does not demonstrate ability to consistently use include two of the factor areas	Defense of chosen solution limited to one of the factor areas

General Education Approval Tracking Form

As of 26 January 2014

Course Subject and Number: _____ Number of Credits: _____

Course Title: _____

Check only one of the topic areas below. If a course is going to meet more than one topic area below please use a separate form for each topic area.

Required Core

- ENGL 110
- ENGL 120
- COMM 110
- MATH _____
- INT 110/310

Critical Capacities (CCS) Skills

- CCS1 Problem Solving
- CCS2 Information Literacy
- CCS3 Critical Reading
- CCS4 Quantitative Literacy
- CCS5 Oral/Written Communications
- CCS6 Collaboration

Foundational Content

- FC1 Arts & Humanities
- FC2 Lab Science
- FC3 Social Science
- FC3 History

Personal and Social Responsibility (PSR)

- PSR1 Relationships and Value Systems
- PSR2 Responding to Community Needs
- PSR3 Individual Well-Being

Interconnecting Perspectives (IP)

- IP1 Knowledge
- IP2 Experience

Form Submitter: _____

General Education Chair Signature and Date

Faculty Senate Secretary Signature and Date

Vice President of Academic Affairs Signature and Date

