Critical Thinking and Problem-Solving Criteria for MCC Students with Curricular Examples

Developing (Application level) *Student completing 30 credits of college-level work should be proficient at this level, working towards Competent level.*	**Proficient (Analysis level)** *Student graduating from MCC should be proficient at this level, working towards Advanced level.*	**Advanced (Synthesis/Evaluation level)** *Student completing a Bachelor's degree should be proficient at this level.*
Identifies and uses relevant information to address a task	**Finds** relevant information to address a task, **distinguishing between** evidence and assumption	**Generates and/or finds and evaluates** relevant information to **creatively** address a task, or address a task **in new contexts, distinguishing between** evidence and assumption.
Uses formula, procedure, principle, or theme provided to address a task	**Selects, uses and justifies** use of formula, procedure, principle, or theme to address a task	**Justifies** use of formulas, procedures, principles, or themes that **creatively** address a task, or address a task **in new contexts**
Addresses a major task successfully when the **components** of the task are **presented as distinct**.	Addresses a task by **dissecting components**, **identifying their underlying structure and relationship** to the task	**Develops a plan** to address a task comprehensively
Identifies and presents an abbreviated conclusion or simple solution, position or perspective that is mostly consistent with the evidence presented, with minor inconsistencies or omissions	**Compares and contrasts** two or more strategies, positions, or perspectives, then **draws and presents detailed** conclusions or solutions that are complete, well-supported, logically consistent with evidence used	**Generates and/or draws, evaluates and presents creative** solutions, conclusions, positions, or perspectives that are complete, well-supported, logically consistent with evidence used.

EXAMPLES FOR DEVELOPING (APPLICATION) LEVEL	EXAMPLES FOR PROFICIENT (ANALYSIS) LEVEL
ADVISING EX: Identify/modify personal/professional goals and use them to inform choice of program and course selection.	**ADVISING EX:** Perform a "cost-benefit" analysis of program change – "What are the consequences of this change on my progress towards graduation/transfer/career?" Make informed decision based on this analysis.
ADVISING EX: Use Degree Audit or Program Sheet to chart progress towards degree completion or other academic goals.	**ADVISING EX:** Analyze/self-assess and articulate one's progress towards goals.
MATH: appropriate tool use **EX:** Calculate an amortization schedule for repayment of a loan.	**MATH:** appropriate tool selection (choose, use, justify multiple tools) **EX:** Compare the advantages and disadvantages of different loan structures, choose structure appropriate to situation and justify choice.
SCI EX: Use the scientific method to solve problems.	**SCI EX:** Choose and use the most appropriate test for an experiment. Find other studies to support work. Identify other questions that can be asked.
BASIC WRITING EX: Writes an essay that develops a thesis following the pattern of a five paragraph essay	**BASIC WRITING EX:** Creates a form for an essay that is appropriate for expressing and supporting a main idea aimed at a particular audience
SOC EX: After reading assigned article on prison overcrowding in US, list the main reasons for the overcrowding, then explain three ways to alleviate overcrowding.	**SOC EX:** Find information on prison overcrowding in US and other countries. Compare/contrast reasons for different imprisonments rates in US and another country. Prepare, present, and defend proposal for lowering US imprisonment rates.
SERV LRNING EX: Identify a community need at a service-learning site, then use theories and concepts from the text and class discussions to provide a broader understanding of the need. Identify one or two strategies that might assist the site in addressing this need, and explain how the strategy(ies) would likely impact the service-learning site.	**SERV LRNING EX:** Analyze underlying reasons for an existing community need at a service-learning site. Based on your reading, class discussions, and knowledge of the site, compare and contrast the relative value of two strategies that might be considered to assist the site in addressing this need.
ELEM ED EX: Examine a range of instructional strategies useful in elem ed, and identify the learning needs and developmental stages to which each strategy might be most appropriately applied.	**ELEM ED EX:** Examine the case of a student w/ exceptional ed needs. Using frameworks from ed and psych courses, identifies child's learning needs and chooses appropriate instructional strategies to respond to those needs.
ART EX: Learn how to use artistic design principles	**ART EX:** Create a sculpture that reveals no hint of the nature of the orig raw materials. Articulate in oral pres how principles of prob solving informed one's creative process.
NURSING EX: Learn how to use adaptation theory to solve problem.	**NURSING EX:** Analyze relationships among key factors known to influence nutritional adequacy in individuals adapting to adolescence, pregnancy, lactation, old age, in order to plan diets for them. Chooses among nursing concepts and frameworks and applies them to make meaningful diagnosis
NURSING EX: Student learns about health and hygiene behaviors of various ethnic and cultural groups, and can identify ways in which economic and social factors influence those behaviors.	**NURSING EX:** Student researches health and hygiene behavior of ethnic or cultural group diff from one's own, examining economic and social factors that influence those behaviors, comparing previous perception of the group's practices w/ what her research has revealed, comparing and contrasting group's practices with one's own.
DENTAL HYGIENE EX: Student utilizes computer databases, class/online discussion and/or interviews to identify an oral health need in our world where further research is needed and submits a written proposal for a table clinic project	**DENTAL HYGIENE EX:** Student collects and interprets data, identifies gaps in and need for further research. Student will communicate the results orally and in writing and will field questions from the professional and general public.
BUS & ENGIN TECH EX: Student uses appropriate formula/tool/process to solve problems.	**BUS & ENGIN TECH EX:** Student identifies underlying assumptions, chooses appropriate formula/tool/process and uses it to solve problems, explaining correspondence of assumptions and results.

Resources used to develop this rubric came from Alverno College, Butler CC, Valencia CC, Surry CC (based on the work of Dr. Richard Paul and Dr. Linda Elder), Washington State U, NACADA (presentation by Suffolk U and U Missouri), and the Foundation for Critical Thinking in Dillon Beach, CA

Thanks to Critical Thinking ISLO committee members: Robert Awkward, Nancy Baccari, Binnur Ercem, Jillian Haley, Stan Hitron, Pat Hunt, Joe Kalus, Cynthia Lynch, Elise Martin, Mary Mogan-Vallon, Gail Mooney, Lucy Ogburn, Rae Perry, Sally Quast, Donis Tatro, Hayat Weiss, Jane Wiggins