

**CETYS University System.  
Academy of Institutional Learning Outcomes  
Measurement rubric for RAI #3: Critical Thinking  
Mexicali, B.C., February 24, 2009**



**Introduction.**

The following rubric has been elaborated by the Academy of Institutional Learning Results (ARI) for purposes of assessment with regards to the **critical thinking** institutional learning outcome. The rubric is holistic and considers 4 criteria for assessment: Outstanding (OU), Improvable (IM), Sufficient (SU) and Insufficient (IN). With regards to the use of the rubric, It is expected that undergraduate students obtain, for the most part, **at least a sufficient** in their first three semesters of their academic program; **at least an improvable** between their 4<sup>th</sup>, 5<sup>th</sup> and 6<sup>th</sup> semesters; and an **outstanding** in their 7<sup>th</sup> and 8<sup>th</sup> semesters. However it is justifiable that in some courses the student may be expected to have a higher performance due to the fact that they possess a high potential to do so. For graduate students it is expected that most have **at least an improvable** in all the courses of their academic program, up to the point in which they present their application project, master's thesis or doctoral dissertation. In these last three cases, it will be expected that the majority of graduate students obtain an **outstanding**.

**RAI # 3: Critical Thinking.**

At the end of their academic program, students will be able to:

Express self-regulated, contextualized and purposeful points of view or judgments, after interpreting, analyzing, evaluation, inferring and or explaining evidence either conceptual, methodological or of the application of criteria, rules, principles, values or beliefs.

The application of this rubric seeks that Higher Education students improve their abilities to identify, summarize and reformulate **problems and questions**; identify and consider the influence of **context** (social, cultural, ethical, economic, political, scientific, technological, educational, and personal experience) as well as **assumptions or considerations**; develop, present and communicate their ideas, **hypothesis and perspectives**; analyze, evaluate and present **data, information and evidence**; integrate questions using other **perspectives and views** with regards to an idea, concept or circumstance; as well as identifying and evaluating **conclusions, implications and consequences**.

The learning products that allow for the observation of these abilities are research articles, presentations, essays, application and research project reports, final project reports, non-structured or weakly structured problem solving results, thesis work, artistic work critique, case analysis reports, written and oral exams, documents that demand the expression of a point of view regarding an idea, concept or circumstance, or the interpretation of data and obtained results.

**Institutional Rubric for critical thinking.**

**Student Name:**  
**Name and Type of Work:**  
**Course:**

<b>OU: Outstanding (91-100 points)</b>	<b>Points Obtained</b>
<p><b>Consistently exhibits all or most of the following abilities:</b></p> <ol style="list-style-type: none"> <li>1. <b>Interprets</b> in a precise manner: evidence, declarations, graphs, questions, etc.</li> <li>2. <b>Identifies</b> derived arguments (reasons and affirmations) in favor or against.</li> <li>3. <b>Generates</b> alternative explanations of events and phenomena.</li> <li>4. <b>Formulates</b> well grounded, reasoned conclusions, free of fallacy.</li> <li>5. <b>Analyzes</b> and evaluates in a reflexive manner primary points of view.</li> <li>6. <b>Justifies</b> the most important results and procedures, <b>explaining</b> assumptions and reasoning.</li> <li>7. <b>Impartial posture</b> to follow where the evidence or reasoning guides.</li> <li>8. <b>Makes</b> ethical judgments.</li> </ol>	
<b>IM: Improbable (81-90 points)</b>	<b>Points Obtained</b>
<p><b>Consistently exhibits all or most of the following abilities:</b></p> <ol style="list-style-type: none"> <li>1. <b>Interprets</b> in a precise manner: evidence, declarations, graphs, questions, etc.</li> <li>2. <b>Identifies</b> derived arguments (reasons and affirmations) in favor or against.</li> <li>3. <b>Generates</b> alternative explanations of events and phenomena.</li> <li>4. <b>Formulates</b> well grounded, reasoned conclusions, free of fallacy.</li> <li>5. <b>Demonstrates</b> a basic ability to formulate inferences.</li> <li>6. <b>Presents</b> analysis and evaluation of obvious points of view.</li> <li>7. <b>Justifies</b>, via their use, some results and procedures, <b>explaining</b> assumptions and reasoning.</li> <li>9. <b>Impartial posture</b> to follow where the evidence or reasoning guides.</li> </ol>	
<b>SU: Suficiente (71-80 puntos)</b>	<b>Points Obtained</b>

<p><b>Consistently exhibits all or most of the following abilities:</b></p> <ol style="list-style-type: none"> <li>1. <b>Interprets</b> erroneously: evidence, declarations, graphs, questions, etc.</li> <li>2. <b>Identifies</b> relationships between information sources in a limited manner. Begins to make use of appropriate evidence to back up ideas.</li> <li>3. <b>Shows difficulty</b> in thinking in an organized manner and thought is inconsistent.</li> <li>4. <b>Shows</b> little evidence of being able to rethink or refine points of view.</li> <li>5. <b>Fails</b> to identify strong and relevant counter-arguments.</li> <li>6. <b>Ignores</b> or <b>evaluates</b> superficially obvious and diverse points of view.</li> <li>7. <b>Maintains</b> or <b>defends</b> points of view based upon self interests and pre conceptions, in spite of available evidence and reasoning.</li> <li>8. <b>Discusses</b> literature, experiences, and others' points of view in terms of own experience.</li> <li>9. <b>Takes</b> some risks occasionally questioning information sources or making interpretations or predictions.</li> <li>10. <b>Responds</b> to information sources in a literal manner or at the factual level.</li> </ol>	
<p><b>IN: Insuficiente (0-69 puntos)</b></p>	<p><b>Points Obtained</b></p>
<p><b>Consistently exhibits all or most of the following abilities:</b></p> <ol style="list-style-type: none"> <li>1. <b>Fails</b> to identify or prematurely disqualifies strong and relevant contradictory arguments.</li> <li>2. <b>Ignores</b> or superficially evaluates obvious and diverse points of view.</li> <li>3. <b>Maintains</b> or <b>defends</b> points of view based on self interest and pre conceptions, in spite of available evidence and reasoning.</li> <li>4. <b>Offers</b> non objective interpretations of evidence, declarations, graphs, information and others' points of view.</li> <li>5. <b>Generates arguments</b> using irrelevant reasons and fallacy, or non grounded rebukes.</li> <li>6. <b>Does not justify</b> results or procedures or reasoning.</li> <li>7. <b>Exhibits</b> a closed mind or hostility towards thinking and reasoning.</li> </ol>	

Table to concentrate assessment results for the course

#	Student number	Name	Gender (M/F)	Grade awarded for the learning outcome	Achieved learning (IN; SU, IM o OU)
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
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22					
23					
24					
25					

### Instructions for the use of the critical thinking holistic rubric.

❶ Identify the learning product as well as the learning or evaluation activities that may be better used to assess critical thinking in the student. It is the faculty's responsibility to identify, based on this rubric, which of all the indicated abilities in their different levels, are most ideal and obvious for the course, then design a learning activity that facilitates the assessment of critical thinking, **or better yet**, use a pre-designed activity, making adjustments to the learning products, and in case it is necessary, incorporate evidence of critical thinking. The identification of the pertinent abilities for the class, in each levels of the rubric, will allow for the interpretation of the abilities or circumstances that are indicated in the rubric levels.

❷ Esta rúbrica holística requiere que el profesor se enfoque en el pensamiento crítico del estudiante, diferenciándolo de su conocimiento del contenido del curso y de su habilidad técnica para aplicarlo. En un producto de aprendizaje (ensayo, presentación, práctica o demostración, examen, reporte de aplicación o de investigación, tesis o discusión escrita de un caso) estos tres elementos están presentes, pero la atención se debe concentrar en medir **solamente** el pensamiento crítico.

❸ Calibration of rubric. In order for assessment outcomes to be more objective and for students to obtain some **-feedback-** to help improve their learning, it is necessary for instructors to calibrate the use of criteria in the rubric. That is, it is necessary for two or more instructors to practice the use of the rubric on the same learning product in order to then compare outcomes and contrast differences. This contrast and discussion of outcomes will allow them to homogenize and fine tune their evaluation criteria, which will reduce variation and inconsistencies of the outcomes.

❹ Use this rubric to communicate to students the outcome of their evaluations. This way they will begin to identify their own level of learning, the level of improvement that is expected from them, and most importantly: clarify where and how learning can be improved.

❺ Document any difficulties identified in the use of this rubric and communicate them to the Academy of Learning Institutional Results (ARI):

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Only the frequent use of this rubric gives way to its improvement and skillful use. We admit this is just a good beginning and with every user's cooperation it will be perfected.

❻ Once the rubric has been applied for evaluation of learning products, proceed to summarize all result of the total number of students analyzed in the annexed chart. In this chart, the information of each student and their assessment is concentrated. **This information and the evidence/product of learning will be sent to the Electronic Portfolio of the Institution.**