Critical Thinking and Research Skills – DRAFT rubric August 10, 2005

Goal: University of Maryland undergraduates should learn and develop critical thinking and research skills that they can successfully apply within a wide range and intersection of disciplines inside and outside of academia.

Objectives – University of Maryland undergraduates should have the ability to:

1. Identify and analyze the issue(s), the position of the source, key assumptions, and contextual relevance.
2. Recognize and state pertinent perspectives, propositions, and positions including the student's own and formulate hypotheses and persuasive arguments.
3. Assess the quality of supporting information and provide additional evidence.
4. Appraise conclusions, implications, and consequences.
5. Frame significant research problems and assess strategies for investigation.
6. Use various research methods to solve research problems.
7. Present research solutions in a variety of written, oral, and technology assisted formats.

Modified From:

Center for Teaching and Learning Critical Thinking Rubric http://www.neiu.edu/~ctl/bulletins/Bulletin%2011.pdf
Washington State University The Critical Thinking Rubric http://wsuctproject.ctlt.wsu.edu/ctr.htm
National Teacher Enhancement Project Assessing Student Work Rubric for Conducting a Research Study http://www-ed.fnal.gov/trc/rubrics/research.html
North High School Library, Downers Grove, IL Research Process Rubric http://www.csd99.k12.il.us/north/library/PDF/researchRubric.pdf
Toronto District School Board Information Literacy Rubric http://www.accessola.com/osla/curriculum/pdf/gd11_ssr_info_lit_rubric.pdf
Oak Harbor Schools, Washington Information Skills Rating Scale http://www.fno.org/libskill.html
North Central Regional Educational Laboratory Assessment Rubrics http://www.ncrel.org/mands/FERMI/prairie/9prairie/9rub1.html
Chicago Public Schools Bureau of Student Assessment Rubric for Technical Writing http://intranet.cps.k12.il.us/Assessments/Ideas_and_Rubrics/Rubric_Bank/WritingRubrics.pdf
NC Department of Public Instruction IT Evaluation Services Presentation Rubric http://www.ncsu.edu/midlink/rub.pres.html
Howe High School The Science Room Science Presentation Evaluation Rubric http://www.howe.k12.ok.us/~jimaskew/evalpres.htm
Pearson Prentice Hall Professional Development http://www.phschool.com/professional_development/assessment/rub_oral_presentation.html
Aviston Elementary School 6th Grade Science Class Grading Rubric http://www.schools.lth5.k12.il.us/aviston/KBLesson1.html

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	1	2	3	4	5
1. Identify and analyze the issue(s), the position of the source, key assumptions, and contextual relevance.	Fails to identify, summarize, or explain the main problem or question; represents the issues inaccurately or inappropriately; presents problems as having no connections to other conditions or contexts; does not surface the assumptions and ethical issues that underlie the issue	Identifies main issues but does not summarize or explain them clearly or sufficiently; assumptions and ethical issues that underlie the question are surfaced superficially; discusses the problem only in egocentric or sociocentric terms; identifies some of the most important assumptions but does not evaluate them for plausibility or clarity	Successfully identifies and summarizes the main issues but does not explain why/how they create questions; shows some general understanding of influences of ethical and theoretical contexts on stakeholders; identifies most of the important assumptions but only evaluates them for plausibility or clarity superficially	Clearly identifies and summarizes main issues and successfully explains why/how they create questions; correctly identifies all the empirical and most of the theoretical contexts relevant to all the main stakeholders; identifies and evaluates all the important assumptions but not those deeper or more abstract	Identifies not only the basics of the issue but recognizes the nuances of the issue; identifies embedded or implicit issues and addresses their relationships to each other; not only correctly identifies all the contexts relevant to main stakeholder but finds minor stakeholders and contexts and shows the tension among them; not only identifies and evaluates all important assumptions but also some hidden and abstract ones
2. Recognize and state pertinent perspectives, propositions, and positions including the student's own and formulate hypotheses and persuasive arguments.	Fails to formulate and clearly express own point of view; fails to anticipate objections to his/her point of view; deals only with a single perspective and fails to discuss other possible perspectives, especially those salient to the issue	Formulates a vague and indecisive point of view; anticipates minor but not major objections to his/her point of view; considers weak but not strong alternative positions; does not clarify presented position relative to one's own	Formulates a personal point of view but only discusses its strengths; anticipates minor and major objections to his/her point of view; considers mostly weak and few strong alternative positions	Formulates a clear personal point of view concerning the issue and briefly notes its weaknesses and discusses its strengths; acknowledges major and minor objections and rival positions; responds to objections to his/her position	Identifies appropriately one's own position on the issue and seriously discusses its weaknesses as well as its strengths; addresses additional diverse perspectives; draws support from experience and outside sources; acknowledges objections and rival positions and provides convincing replies to these
3. Assess the quality of supporting information and provide additional evidence.	Provides no support and/or evidence for claims; uses unreliable sources; does not distinguish between fact, opinion, and value judgments; merely repeats information provided; denies evidence without adequate justification; sources do not relate to question	Identifies data and information that counts as evidence but fails to evaluate its credibility; little support for claims; reaches a hasty conclusion about the validity of a source; uses some unreliable sources	Supports claims with research evidence; two or more types of sources are used; student recognizes who is authoring the information; distinguishes between fact and opinion	Identifies all important evidence and thoroughly evaluates it; supports claims with clear research evidence from valid sources; multiple types or sources are used; the scope, authority, and currency of the information are taken into account; looks for missing information; observes cause and effect	Identifies and rigorously evaluates all important evidence; provides new information for consideration; examines evidence by questioning its accuracy, precision, relevance, and completeness; observes cause and effect and addresses existing or potential consequences
4. Appraise conclusions, implications, and consequences.	Fails to identify implications, conclusions, and consequences of issue; fails to identify the key relationships between the other elements of the problem such as context, assumptions, or data and evidence	Suggests some implications, conclusions, and consequences; no clear reference to context, assumptions, data, and evidence	Identifies but does not discuss implications, conclusions, and consequences; minor references to context, assumptions, data, and evidence	Identifies and briefly discusses implications, conclusions, and consequences; considers most but not all the relevant assumptions, contexts, data, and evidence	Identifies and thoroughly discusses implications, conclusions, and consequences; considers all relevant assumptions, contexts, data, and evidence; objectively reflects upon his/her own assertions

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5. Frame significant research problems and assess strategies for investigation.	Research question missing or undefined; student does not determine what needs to be learned; missing plan to address research question	Research question vague or poorly defined; difficult to determine what needs to be learned; uses a few resources to gain an overview; poor plan to address research questions	Research question is basic but adequately defined; defines a need which results in fact gathering; uses a variety of resources to gain an overview; adequate plan to address research questions	Research question is focused and clear; defines a need which stimulates a quest for personal meaning; explores a wide range of resources to build a knowledge base; well-constructed plan to address research questions	Research question is clear, complete, and requires critical thinking skills; defines a need which evokes original insight and invention; explores a wide range of resources and perspectives as well as connections to prior learning to build a knowledge base; well-constructed research plan to address questions
6. Use various research methods to solve research problems.	Selects inappropriate or ineffective research method; information not accurate or complete; missing explanation of data; incorrectly interprets data; leaves information as gathered; no analysis or conclusion; restates the decisions and solutions of others; no original insight	Selects inefficient research method; few sources used, no variety of sources; information frequently does not relate to research question; poor explanation of data; little evidence of research presented; reaches a poor decision based on few or no factors	Selects an acceptable research method; several sources used, some variety of sources; correctly interprets data or information; only partial organization of information to support understanding reaches a reasonable decision based on most factors; reorganizes and combines strategies of others	Selects appropriate research method; Many sources used, wide variety of sources; accurate and logical explanations of data; reaches a creative, sensible decision based on all factors; reorganizes information so that the most valuable becomes readily available to support understanding	Selects most effective research method; creates an original decision or solution; correct interpretation of data or information; analysis and conclusions based on logical and documented evidence; creates information structure which provides a coherent and clear focus; translates findings into a persuasive, instructive, or effective product
7. Present research solutions in a variety of written, oral, and technology assisted formats.	Shows no understanding of material; topic not covered adequately; no conclusion to summarize presentation; no logical sequence of information; inappropriate type of presentation for topic/audience; presentation distracting; incoherent; presentation length far from assigned requirement; multimedia does not support presentation	Does not have full grasp of information; information does not always support thesis; excludes some important information and includes some unnecessary information; flow and organization is choppy; concepts and ideas loosely connected; presentation length not adequate to cover assigned material; multimedia not clearly connected to thesis	Student demonstrates basic knowledge of information; thesis apparent; information relates to thesis; rarely excludes important information or includes unnecessary information; logical sequence of information; presentation length of minor concern; use of multimedia not as varied but connected to thesis	Demonstrates expected knowledge of information; enough information given to understand topic; points clearly made and all evidence supports thesis; presentation length acceptable; good variety and blending of materials/media	Demonstrates a fuller knowledge of information than required; topic covered thoroughly; abundance of material clearly related to thesis; controlled flow and interesting sequence of material; presentation length entirely appropriate for topic and assignment; balanced use of multimedia materials properly used to develop thesis