

2023 Report  
of  
The Provost's Assessment Committee  
for  
General Education Learning Outcomes

**Committee Members**

**Colleen McKenna** – Professor of Information Systems, Chair

**Ali Ziegler** – Associate Professor of Psychology and Committee

**Carla Kroeze** - Assistant Professor of Accounting

**Christopher Hay-Jahans** – Professor of Mathematics

**Heather Batchelder** - Associate Professor of Education

**Lauren Wild** - Assistant Professor of Applied Fisheries

**Math Trafton** – Associate Professor of English

The Provost's Assessment Committee for General Education Learning Outcomes (PAC GELO) was formed in the Fall of 2016. It was initially charged with developing assessment tools as well as a process to assess the extent to which UAS undergraduate students have acquired academic skills broadly expected through the completion of UAS prescribed General Education Requirements (GER) coursework. Since its inception, the committee has included a diverse range of faculty members from across all three UAS campuses and across different disciplines from within the schools of Education and Career Education, as well as from within the Arts & Sciences' departments of Humanities, Social Sciences, Natural Sciences, and Business and Public Administration. The committee began to work on identifying and creating General Education Learning Outcomes (GELO) soon after representatives from the committee attended an Association of American Colleges & Universities (AAC&U) workshop in February 2017.

Since its original formation over six years ago, the PAC GELO has been successful in developing and assessing general education student learning outcomes using rubrics that we have collaboratively developed, in consultation with Faculty Senate and with individual faculty members who have aided our assessment workshop processes.

This report comprises four sections, each of which outlines phases through which the PAC GELO has passed in meeting its obligations to date, updated in particular to account for the committee's work in 2022-23.

## I. General Education Learning Outcomes & Rubric Development

In their current form, the GELOs are as follows:

1. **Effective Communication:** *Communicate thoughts and ideas effectively, orally and/or in writing.*
2. **Critical Thinking:** *Demonstrate the ability to understand a problem/issue/task at hand, identify relevant facts and/or assumptions, synthesize and conceptualize available information, develop an effective strategy to tackle the problem/issue/task, and arrive at a valid conclusion.*
3. **Creative Thinking:** *Present creative works of expression, innovative approaches to tasks, or solutions to problems.*
4. **Empirical Reasoning:** *Apply the scientific method to well-reasoned questions in the search for answers through data.*
5. **Environmental and Community Engagement:** *Explore Indigenous and global social perspectives, integrating respect for diversity of people, different perspectives of resource sustainability, and human impact on the environment.*

In its early stages, the committee used resources collected from the AAC&U workshop to develop the first GELOs. Following their initial drafting, the GELOs were shared with the Faculty Senate to garner faculty input, and the GELOs were subsequently approved by the Faculty Senate in November 2019. Since that time, the outcomes have undergone occasional minor revisions—with one major revision involving removing what used to be a sixth outcome, Synthesis and Analysis, and folding it into the Critical Thinking and Empirical Reasoning outcomes.

Like the GELOs themselves, the committee also initially developed the rubrics for assessing the GELOs based on material provided in the AAC&U Value Rubrics resources. Each rubric was carefully created to

demonstrate whether an undergraduate student has acquired some level of competency in each of the learning outcomes.

The PAC GELO has found the rubric development to be a process of continuous improvement and thus continues to fine-tune these rubrics based on knowledge gained through each workshop. For example, this year, the committee continued to refine the Critical Thinking GELO and GELO assessment rubric, a process initiated in Spring 2022. This year, the committee also rewrote the language in the description of the GELO itself, and several key points in the assessment rubric were also reframed. The new revision both makes more sense for assessment purposes, and it also aligns more closely with the Critical Thinking and the Empirical Reasoning assessment instruments currently in development.

In the sections that follow, you will find details about the 2022-2023 workshops, results from this year's assessment activities, and suggestions for next steps.

## II. Method of Assessment

Starting in spring 2018, the PAC GELO has assessed a minimum of two GELOs per semester on a rotating basis, as follows:

- **Spring 2018:**
  - Effective Communication
  - Critical Thinking
- **Fall 2018:**
  - Empirical Reasoning
  - Creative Thinking
- **Spring 2019:**
  - Effective Communication
  - Critical Thinking
- **Fall 2019:**
  - Empirical Reasoning
  - Environmental and Community Engagement
- **Spring 2020:**
  - Effective Communication
  - Creative Thinking
- **Fall 2020:**
  - Creative Thinking
  - Critical Thinking
- **Spring 2021:**
  - Empirical Reasoning
  - Environmental and Community Engagement
- **Fall 2021:**
  - Effective Communication
  - Empirical Reasoning
  - Creative Thinking
- **Spring 2022:**
  - Empirical Reasoning
  - Critical Thinking
  - Environmental and Community Engagement

- **Fall 2022:**
  - Effective Communication
  - Creative Thinking
- **Spring 2023:**
  - Empirical Reasoning
  - Critical Thinking

The Fall 2020, Spring 2021, Fall 2021, Spring 2022, and Fall 2022 workshops were conducted online via Zoom due to Covid-19 safety precautions. Each workshop was scheduled for two hours, with participants assessing a single artifact with three to ten student work samples per artifact. An artifact is a written assignment, created by an instructor, to assess a student's learning. The student work samples were assessed based on the GELO rubrics. Unless otherwise specified below, work samples used for the assessment were randomly selected by assigning each student work sample a sequential number, and then running a random number-generating application to determine which samples to assess. The Spring 2023 workshop was canceled in favor of using the new online assessment tool for the Critical Thinking and Empirical Reasoning rubrics.

### **Artifacts, Workshops, and Assessment Tools**

#### ***Fall 2022 - Effective Communication and Creative Thinking***

For the *Effective Communication* and *Creative Thinking* workshop, the committee used a single artifact to assess against both rubrics. The workshop group received a collection of 10 student work samples submitted as a “Personal Statement on Place”. The assignment asked students for a brief essay about a specific personal experience in a specific physical place to which they felt a strong personal connection.

The typical student taking this course is enrolled in either an associate or bachelor’s degree program, and is often in their freshman year. It is a general education course that is required of all students, so students in the course are enrolled in a wide variety of degree programs. To take this course, students must either have passed an introductory college writing course with a C or better, or they must have tested out of that course. This was the second year of using this artifact and assessing it against two rubrics.

The group consisted of seven PAC GELO members (one of whom facilitated) and three other faculty members. At the start of the workshop, the facilitator described the process of the workshop. Then participants read and rated the first student work sample individually. As a group, they then discussed consistencies and discrepancies in each participant's ratings.

This cycle was repeated one or two more times, at which point it became clear that the artifact was not a good fit for the *Creative Thinking* GELO. The group discussed potential modifications to the *Creative Thinking* rubric, as well as artifacts that might be a better fit for future assessment of this GELO. For the fall 2022 workshop, they agreed to some common definitions to use in order to complete the ratings, and then they continued assessing work samples. The discussion was productive, but it took a good portion of time, and it resulted in the group only being able to complete assessment of seven student work samples (although some participants individually completed the rest).

#### ***Spring 2023 - Empirical Reasoning***

To assess *Empirical Reasoning* in Spring 2023, one PAC GELO member administered a standardized online assessment to students in a 200-level statistics course and a 200-level Mathematics for Elementary School Teachers course. The PAC GELO member modified and used the “Salmon Derby” assessment

instrument that had been developed last year. The instrument included data and charts from the results of a local salmon derby over a period of 72 years. Students were asked to respond to a series of multiple choice questions.

### ***Spring 2023 - Critical Thinking***

To assess *Critical Thinking* in Spring of 2023, a PAC GELO member modified and used the same assessment tool that was used last year. The assessment instrument, nicknamed “The Thinker”, was administered to students in the same two courses as the *Empirical Reasoning* assessment using a new “Draft” version of the *Critical Thinking* rubric.

### ***Spring 2023 - Environmental and Community Engagement (Moved to 2023-24)***

The committee’s initial plan was to assess the *Environmental and Community Engagement* GELO in Spring 2023. In previous workshops for this GELO, the committee determined that it would be necessary to have a customized artifact for this GELO, given the broad scope of the rubric’s categories. One PAC-GELO member worked with the Chancellor’s Advisory Committee on Alaska Native Education (CACANE) during the Spring 2023 semester to discuss possible options for a tailored artifact that could be administered across multiple courses that meet the UAS Alaska Native Knowledge Graduation Requirement (ANKGR).

The PAC GELO member and CACANE have made good progress on this and they plan to continue to work on it during the summer and fall of 2023. With that in mind, the committee felt that it would be beneficial to move the assessment of this GELO to 2023-24.

### III. Results

As with the previous round of assessments, raw scores assigned by assessment teams were summarized using pivot tables. There were two aims: the first, to determine the consistency of the scores; and the second, to assess student learning, the actual purpose of the assessment process.

Results from assessments for each of Effective Communication, Creative Thinking, Critical Thinking, and Empirical Reasoning follow.

#### *Results for Effective Communication*

Scores assigned to students for this learning outcome are summarized below.

**Table 3.1:** Summary of scores obtained from the Effective Communication sample works includes mean scores (x), standard deviations (s), and percentages of scores greater than or equal to each benchmark.

		mean	sd	% of work with a score $\geq$		
				1	2	3
Outcomes	1. Audience, focus, and purpose	1.94	0.63	100.0	16.7	0.0
	2. Arrangement of material	1.88	0.89	100.0	33.3	0.0
	3. Content material	1.65	0.91	100.0	33.3	0.0
	4. Supporting material	1.73	0.79	100.0	16.7	0.0
	5. Use of language	1.62	0.87	83.3	50.0	0.0
	Overall Summaries	1.76	0.63	100.0	16.7	0.0

Achievable scores range from 0 through 3, so standard deviations over 0.5 and close to 1 suggest widely varying student scores within each rubric criterion. Average scores for all assessed criteria for the sample were low, ranging over 1.62—1.94, with standard deviations ranging over 0.63—0.91. While a majority of the students assessed achieved the beginning level (scores of 1 or higher) in all three criteria, none achieved the advanced level and only 16.7—50.0% fewer achieved the proficient level.

#### *Results for Creative Thinking*

Scores assigned to students for this learning outcome are summarized below. The artifact used could not be meaningfully aligned with the fourth criterion, “Use of Existing Models,” so this criterion was not assessed.

**Table 3.2:** Summary of scores obtained from the Creative Thinking samples includes mean scores (x), standard deviations (s), and percentages of items with scores greater than or equal to each benchmark.

		mean	sd	% of work with a score $\geq$		
				1	2	3
Outcomes	1. Vision/Framework	1.65	0.95	66.7	33.3	0.0
	2. Details in Ideas	1.52	0.72	66.7	16.7	0.0
	3. Approach to Task	1.40	0.98	66.7	0.0	0.0
	4. Use of Existing Models	-	-	-	-	-
	5. Outcome	1.60	0.67	83.3	0.0	0.0
	Overall Summaries	1.54	0.84	66.7	33.3	0.0

Achievable scores range from 0 through 3, so once again standard deviations close to 1 suggest widely varying student scores within each of the rubric criterion assessed. Average scores for all assessed criteria

for the sample were low, ranging over 1.40—1.65 with standard deviations ranging over 0.67—0.95. The majority of the students achieved the beginning level (scores of 1 or higher) but, once again, none achieved the advanced level (a score of 3) and 0.0—33.3% achieved the proficient level (2 or higher).

### ***Results for Critical Thinking***

Scores assigned to students for this learning outcome, with the revised rubric criteria, are summarized below. On the face of it, the instrument used seemed to work well again this time around and scores were comparable to scores from last year’s pilot.

**Table 3.3:** Summary of scores obtained from the Critical Thinking sample includes mean scores (x), standard deviations (s), and percentages of items with scores greater than or equal to each benchmark.

		mean	sd	% of work with a score >=		
				1	2	3
Outcomes	1. Understanding	2.52	0.27	100.0	100.0	5.9
	2. Facts/Assumptions	2.47	0.30	100.0	100.0	5.9
	3. Synthesis	2.49	0.35	100.0	100.0	5.9
	4. Strategy	2.62	0.30	100.0	100.0	23.5
	5. Conclusions	2.41	0.38	100.0	100.0	5.9
	Overall Summaries	2.50	0.29	100.0	100.0	5.9

Standard deviations are well below 0.5 suggesting fairly consistent student scores within each rubric criterion. Average overall for all assessed criteria for the sample ranged over 2.41—2.62 with standard deviations ranging over 0.29—0.38. All of the students assessed achieved the proficient level (2 or higher), with 23% achieving the advanced level (3) in the “Strategy” criterion.

### ***Results for Empirical Reasoning***

On the face of it, this instrument has worked well for the four times it has been used with scores from the four implementations being fairly comparable— based on the mean scores, student (relative) strengths appear to lie in the “Description” and “Design” areas.

**Table 3.4:** Summary of scores obtained for the Empirical Reasoning sample includes mean scores (x), standard deviations (s), and percentages of items with scores greater than or equal to each benchmark.

		mean	sd	% of work with a score >=		
				1	2	3
Outcomes	1. Description	2.31	0.59	100.0	93.8	25.0
	2. Factors	1.81	0.64	100.0	81.3	12.5
	3. Design	2.11	0.44	100.0	87.5	0.0
	4. Data Collection	1.94	0.40	100.0	87.5	0.0
	5. Results	1.77	0.55	100.0	75.0	6.3
	Overall Summaries	1.99	0.42	100.0	93.8	0.0

The scores earned are a little more spread out than for Critical Thinking, standard deviations ranged over 0.40—0.64, and the average scores for all criteria assessed were lower too. This being said, all students achieved the beginning level (scores of 1 or higher) and the majority of the students achieved the proficient level (scores of 2 or higher). However, not many achieved the advanced level with none for the “Design” and “Data Collection” criteria.

## IV. Lessons Learned and Next Steps

The PAC GELO members have continued to assess GERs and modify GELO rubrics as needed. Our assessment workshops provide an opportunity to assess how well our students are meeting the general education learning outcomes and allow the PAC GELO team to refine our rubrics and tailor them more specifically to meet our needs. All GELOs have been assessed at least four times. Overall, we are satisfied with the content of the rubrics; however, we have continued to make improvements to the rubrics for clarity.

This section includes a breakdown of observations by PAC GELO members and assessment workshop participants, as well as an outline of the committee's proposed next steps.

### *Assessment Observations*

As reported previously, the group feels comfortable with the process and structure of the assessment of sample artifacts according to the GELO rubrics. We are also very grateful for the faculty volunteers who participate in the workshops. We have several repeat volunteers that make the process run very smoothly. This year, we experimented with some new assessment approaches, and we are overall very satisfied with the results.

In the December 2022 workshop, we assessed an artifact from Writing 111 using the GELO #1 (Effective Communication) & GELO #3 (Creative Thinking) rubrics. Continuing with this work, we assessed a new artifact from Writing 111. We combined both into a single session. Each committee member recruited one or two participants to assess two rubrics at once, using the same artifact set. Some insights from using the Creative Thinking rubric include the following:

*When a student deviates from the assignment, it's hard to assess whether the student is being very creative and taking risks or whether they completely misunderstood the assignment.*

*It's not clear what models the students have and how they might be looking outside.*

*Models could be problematic.*

Feedback regarding the Effective Communication Rubric included:

*It's important to not assess the student work according to assigned rubrics (how well they meet the assignment) and instead to focus on the communication elements themselves.*

*Though we also want to keep in mind the purpose of the assignment, as it's not necessarily effective communication if they write about something completely unrelated to the prompt.*

*In Arrangement of Material, for mastery, "coherence" seems more appropriate than the current cohesiveness.*



The artifact we used for the workshop was a great fit for the communication rubric; however, it was not a good match for the creative thinking rubric. It was harder to assess the artifact based on the creative thinking rubric. Moving forward, we would like to use an artifact from a creative writing course, as it would likely be a better fit for both rubrics. When these two rubrics were paired together, workshop participants were able to separate their assessment to focus entirely on the communication and then entirely on creativity; however, participants reported much greater confidence in more accurately assessing communication. While we understand that not all combinations of rubrics may work together smoothly, we plan to continue experimenting with combining different rubrics in the future. Our ideal long-term goal is to combine all five rubrics to a limited number of artifacts to demonstrate the potential for faculty to generate assignments that reinforce a more rounded student development, regardless of a course's discipline.

During the 2022/2023 academic year, the committee reached out to CACANE to discuss the Environmental and Community Engagement Rubric and the possibility of getting an artifact from them to assess during the spring workshop. CACANE's long-term goal is to have an assignment that is offered in multiple ANKGR courses. For the May 2023 workshop, an artifact from a single course was requested; however we were not able to obtain an artifact in time, so we will continue to work with CACANE over the summer to acquire an artifact for review in 2023-24.

The May 2023 workshop was canceled in favor of focusing on the Critical Thinking and Empirical Reasoning assessments. During 2022, the Committee developed two respective automated multiple-choice assessment quizzes of 25 questions each (for example, the Empirical Reasoning quiz asks students to interpret a graph of winning weights from the Golden North Salmon Derby over time). Each question in each of these two quizzes is aligned with a specific criterion in the Critical Thinking rubric or the Empirical Reasoning rubric, respectively.

The Committee continues to work on refining the critical thinking questions that we piloted in spring 2022. Both assessments are being administered to all students enrolled in a particular section of MATH S212, Mathematics for Elementary School Teachers II, this spring semester. The new draft version of the Critical Thinking rubric is being used for this assessment and work will continue on incorporating criteria for each category and level (see new version in "Rubrics" section at the end of this document). The committee agreed that the new learning outcome language and rubric are a better fit, and supported moving forward with them. The new wording for the Critical Thinking learning outcome will advance to the Faculty Senate for approval:

- Current Critical Thinking GELO: Demonstrate comprehensive exploration of issues, ideas and/or theories, artifacts, and events before accepting or formulating an opinion, conclusion, or solution.
- Proposed Critical Thinking GELO: Demonstrate the ability to understand a problem/issue/task at hand, identify relevant facts and/or assumptions, synthesize and conceptualize available information, develop an effective strategy to tackle the problem/issue/task, and arrive at a valid conclusion.

There are a few areas that we hope to improve moving forward. Artifact-rubric fit has continued to be a minor area of concern. Although this did not cause any major issues, it is a part of the process that we are always interested in improving. Every year, there seem to be improvements made in our ability to select appropriate artifacts, but it's possible that there are other changes that could be made to the process that would eliminate this concern.

### *Rubric Design*

Actual application of the rubrics during the workshops has continued to provide crucial feedback resulting in even more user-friendly versions of the rubrics. In particular, this year we spent a lot of time rethinking and revising the Effective Communication and Creative Thinking rubrics, based on workshop participant feedback. Additionally, *Environmental and Community Engagement*, the least-assessed rubric, continues to be a work in progress. Although we have made some minor changes to the rubric, the plan is to continue to modify this rubric based on feedback from the workshop and CACANE. The learning outcome seems to be both very broad and simultaneously too specific causing us to question the overarching goal of this GELO and its associated GERs. During the spring semester, CACANE proposed some draft edits to the rubric, which were reviewed and approved. The suggestions include: changing the row header “NOT YET” to “NO EVIDENCE”, and “MASTERY” to “ADVANCED.” The Committee agreed that students taking 200 level courses should not be expected to have “mastered” anything! (For consistency, we edited the row headings in the other rubrics so they are aligned). At a time when UAS is thinking critically about decolonizing higher education, it seems appropriate to interrogate our GELOs to better understand how they may address this goal.

### *Next Steps*

In an effort to respond to some of our past challenges, we will continue to explore the effectiveness of standardization through digitization and some ideas around asynchronous assessments. These are ongoing discussions within the PAC GELO team. Given the nature of the different GELOs, it still seems likely that this method could only apply to the *Empirical Reasoning* and *Critical Thinking* GELOs, but we will continue to think through this process and experiment as relevant.

The committee will ensure that the AA and AS assessment committees receive our annual assessment reports once they are completed. Both degrees mainly consist of GERs, so they may find our data to be useful in avoiding duplication of efforts.

Our assessment cycle continues as we plan to assess as many GELOs as possible. In the future, as we continue to refine our automated assessment for some GELOs, we hope to assess some GELOs twice within the same year. We currently plan to follow the assessment schedule we followed this year, perhaps adding more if the opportunity arises. The committee will therefore work according to the following tentative assessment schedule:

- Fall 2023: GELO #1 (*Effective Communication*) & GELO #3 (*Creative Thinking*).

- Spring 2024: GELO #2 (*Critical Thinking*) & GELO #4 (*Empirical Reasoning*) & GELO #5 (*Environmental and Community Engagement*).

Throughout the last few years of assessment, the PAC GELO team has discussed the potential benefits of designing an artifact for a course in advance of the workshop to address some of the artifact-rubric design concerns mentioned previously. In other words, we welcome the opportunity to work with a faculty volunteer to design an assignment prior to the beginning of the semester with the goal of using the assignment for the workshop. After much discussion, it appears that we have a faculty volunteer willing to attempt this. Although it is not required or expected for one course to fully meet all criteria of a GELO, designing an assignment to meet the rubric could improve the assessment process and may even aid in the overall goal of closing the loop and better understanding our students' specific strengths and areas in need of improvement.

The committee also continues to work toward their long-term goal of helping UAS scale up the assessment processes. In the past year, the charge of the committee has been clarified and, though it is not exclusively our responsibility to find ways to improve student scores in some of the weaker areas, we are still a part of the overall UAS mission to turn the results of assessment into useful information related to the instructional programs at UAS. The PAC GELO committee continues to engage with the larger UAS learning community to determine whether undergraduate students are meeting the GELO outcomes.

# RUBRICS

## 1. **EFFECTIVE COMMUNICATION:** Communicate thoughts and ideas effectively, orally and/or in writing.

	<b>AUDIENCE, CONTEXT, AND PURPOSE...</b>	<b>CONTENT MATERIAL (CENTRAL MESSAGE OR ARGUMENT)...</b>	<b>ARRANGEMENT OF MATERIAL...</b>	<b>SUPPORTING MATERIALS (DETAILS, INFORMATION, RESOURCES)...</b>
<b>NOT APPLICABLE</b>	<input type="checkbox"/> N/A	<input type="checkbox"/> N/A	<input type="checkbox"/> N/A	<input type="checkbox"/> N/A
<b>NO EVIDENCE (0)</b>	<input type="checkbox"/> ...are not considered.	<input type="checkbox"/> ...is not appropriate for the assigned task.	<input type="checkbox"/> ...is not organized.	<input type="checkbox"/> ...are not present or are not appropriate.
<b>BEGINNING (1)</b>	<input type="checkbox"/> ...are somewhat considered.	<input type="checkbox"/> ...is presented in a somewhat general manner that is relevant to the assigned task.	<input type="checkbox"/> ...incorporates basic transitions through shifts in topic.	<input type="checkbox"/> ...are clearly referenced within the work.
<b>PROFICIENT (2)</b>	<input type="checkbox"/> ...are clearly aligned with the assigned task.	<input type="checkbox"/> ...is developed or presented in a specific and detailed manner.	<input type="checkbox"/> ...follows consistent patterns throughout the entire work.	<input type="checkbox"/> ...are relevant to the assigned task and are integrated effectively.
<b>ADVANCED (3)</b>	<input type="checkbox"/> ...are addressed according to the assigned task, with full nuance and complexity, demonstrating deep understanding.	<input type="checkbox"/> ...effectively, clearly and creatively conveys the central message or argument in a compelling manner.	<input type="checkbox"/> ...skillfully maintains the work's cohesiveness.	<input type="checkbox"/> ...are used to thoroughly develop ideas appropriate for the discipline and genre of the assigned task.

2. **CRITICAL THINKING (CURRENT):** Demonstrate comprehensive exploration of issues, ideas and/or theories, artifacts, and events before accepting or formulating an opinion, conclusion, or solution

**CRITICAL THINKING (PROPOSED):** Demonstrate the ability to understand a problem/issue/task at hand, identify relevant facts and/or assumptions, synthesize and conceptualize available information, develop an effective strategy to tackle the problem/issue/task, and arrive at a valid conclusion.

***Current Critical Thinking Rubric:***

	ISSUE OR PROBLEM TO BE CONSIDERED CRITICALLY...	PERSPECTIVE, THESIS, OR HYPOTHESIS...	ASSUMPTIONS...	INFORMATION TAKEN FROM SOURCES...	CONCLUSION OR RELATED OUTCOMES...
<b>NOT APPLICABLE</b>	<input type="checkbox"/> N/A	<input type="checkbox"/> N/A	<input type="checkbox"/> N/A	<input type="checkbox"/> N/A	<input type="checkbox"/> N/A
<b>NO EVIDENCE (0)</b>	<input type="checkbox"/> ...is not stated.	<input type="checkbox"/> ...is not stated.	<input type="checkbox"/> ...are not acknowledged.	<input type="checkbox"/> ...is not present.	<input type="checkbox"/> ...is not present.
<b>BEGINNING (1)</b>	<input type="checkbox"/> ...is implied.	<input type="checkbox"/> ...is implied.	<input type="checkbox"/> ...are identified.	<input type="checkbox"/> ...is included.	<input type="checkbox"/> ...is tied to some of the information discussed.
<b>PROFICIENT (2)</b>	<input type="checkbox"/> ...is presented in a clear and logical manner.	<input type="checkbox"/> ...is explicitly stated.	<input type="checkbox"/> ... are discussed.	<input type="checkbox"/> ...is used to develop a coherent analysis or synthesis.	<input type="checkbox"/> ...clearly identifies some related outcomes (consequences or implications).
<b>ADVANCED (3)</b>	<input type="checkbox"/> ...is framed in such a manner that delivers information necessary for clear and complete understanding.	<input type="checkbox"/> ...takes into account the complexities of the issue.	<input type="checkbox"/> ... are used to question the context and/or others' assumptions.	<input type="checkbox"/> ...is used to develop an effective and comprehensive analysis or synthesis.	<input type="checkbox"/> ...incorporates opposing viewpoints and/or limitations.

***Proposed Critical Thinking Rubric:***

	<b>A - Understanding</b>	<b>B - Facts/Assumptions</b>	<b>C - Synthesize/Conceptualize</b>	<b>D - Strategy</b>	<b>E - Conclusion</b>
<b>Not Applicable</b>					
<b>No Evidence (0)</b>					
<b>Beginning (1)</b>					
<b>Proficient (2)</b>					
<b>Advanced (3)</b>					
<b>Comments</b>					

**A:** Demonstrate the ability to understand a problem/issue/task at hand.

**B:** Identify relevant facts and/or assumptions.

**C:** Synthesize/conceptualize available information.

**D:** Develop an effective strategy to tackle the problem/issue/task.

**E:** Arrive at valid conclusion.

3. **CREATIVE THINKING:** Present creative works of expression, innovative approaches to tasks, or solutions to problems.

*The committee will explore revisions to this rubric based on feedback from the Fall 2022 workshop.*

	STUDENT'S VISION AND FRAMEWORK OF EXPLORING IDEAS...	DETAILS IN STUDENT'S IDEAS, QUESTIONS, FORMATS, OR PRODUCTS...	STUDENT'S APPROACH TO THE TASK...	STUDENT'S USE OF EXISTING MODELS...	STUDENT'S OUTCOME (OBJECT, SOLUTION, OR IDEA)...
NOT APPLICABLE	<input type="checkbox"/> N/A	<input type="checkbox"/> N/A	<input type="checkbox"/> N/A	<input type="checkbox"/> N/A	<input type="checkbox"/> N/A
NO EVIDENCE (0)	<input type="checkbox"/> ...relates strictly to the assigned task.	<input type="checkbox"/> ...relate strictly to the assigned task.	<input type="checkbox"/> ...relates strictly to the assigned task.	<input type="checkbox"/> ...copies or restates what is already available.	<input type="checkbox"/> ...does not serve its intended purpose.
BEGINNING (1)	<input type="checkbox"/> ...considers alternative perspectives.	<input type="checkbox"/> ...show signs of original thought.	<input type="checkbox"/> ...considers alternative processes.	<input type="checkbox"/> ...shows signs of deviation from expectations and common assumptions.	<input type="checkbox"/> ...serves its intended purpose (for example, solving a problem or addressing an issue).
PROFICIENT (2)	<input type="checkbox"/> ...actively explores alternative perspectives.	<input type="checkbox"/> ...demonstrate uniqueness and novelty.	<input type="checkbox"/> ...experiments with alternative processes.	<input type="checkbox"/> ...actively explores ideas in alternative contexts.	<input type="checkbox"/> ...makes an original contribution in its intended purpose.
ADVANCED (3)	<input type="checkbox"/> ...engages in untested and potentially risky approaches to the assigned task(s).	<input type="checkbox"/> ...challenge traditional limitations.	<input type="checkbox"/> ...applies alternative processes with consideration to consequences.	<input type="checkbox"/> ...synthesizes what is already available to apply ideas in a new context.	<input type="checkbox"/> ...provides a meaningful answer to the task in an original and surprising context.

4. **EMPIRICAL REASONING:** Apply the scientific method to well-reasoned questions in the search for answers through data.

	A DESCRIPTION OF THE PROBLEM...	FACTORS APPLICABLE TO THE PROBLEM...	DESIGN OF THE STUDY...	DATA COLLECTION METHOD...	RESULTS...
<b>NOT APPLICABLE</b>	<input type="checkbox"/> N/A	<input type="checkbox"/> N/A	<input type="checkbox"/> N/A	<input type="checkbox"/> N/A	<input type="checkbox"/> N/A
<b>NO EVIDENCE (0)</b>	<input type="checkbox"/> ...is not present.	<input type="checkbox"/> ...are not identified.	<input type="checkbox"/> ...is not present.	<input type="checkbox"/> ...is not identified.	<input type="checkbox"/> ...are not present.
<b>BEGINNING (1)</b>	<input type="checkbox"/> ...is outlined.	<input type="checkbox"/> ...are identified.	<input type="checkbox"/> ...is described in terms of its purpose and objective.	<input type="checkbox"/> ...is identified.	<input type="checkbox"/> ...are summarized as appropriate to the discipline.
<b>PROFICIENT (2)</b>	<input type="checkbox"/> ...is clear and complete.	<input type="checkbox"/> ...are classified clearly.	<input type="checkbox"/> ...identifies appropriate methodology.	<input type="checkbox"/> ...is implemented correctly.	<input type="checkbox"/> ...are interpreted as appropriate to the discipline.
<b>ADVANCED (3)</b>	<input type="checkbox"/> ...is formulated to include a proper and precise research question.	<input type="checkbox"/> ...are formulated into an appropriate testable hypothesis.	<input type="checkbox"/> ...identifies limitations of the proposed study.	<input type="checkbox"/> ...is used to produce (or leads toward) consistent and accurate data.	<input type="checkbox"/> ...are used to provide clear and concise scientific explanations of analysis.



5. **ENVIRONMENTAL AND COMMUNITY ENGAGEMENT:** Explore Indigenous and global social perspectives with respect for diversity of people, different perspectives of resource sustainability, and human impact on the environment.

*Modified in Spring 2023 based on input from the Chancellor’s Advisory Committee on Alaska Native Education (CACANE).*

	<b>INFLUENCE OF CULTURAL NORMS...</b>	<b>LOCAL INDIGENOUS KNOWLEDGE (LIK) AND PERSPECTIVES...</b>	<b>DIVERSE GLOBAL PERSPECTIVES...</b>	<b>HUMAN/SOCIAL IMPACT ON AN ENVIRONMENT...</b>
<b>NOT APPLICABLE</b>	<input type="checkbox"/> N/A	<input type="checkbox"/> N/A	<input type="checkbox"/> N/A	<input type="checkbox"/> N/A
<b>NO EVIDENCE (0)</b>	<input type="checkbox"/> ...is not acknowledged.	<input type="checkbox"/> ...are not acknowledged.	<input type="checkbox"/> ...are not acknowledged.	<input type="checkbox"/> ...is not acknowledged.
<b>BEGINNING (1)</b>	<input type="checkbox"/> ...is acknowledged.	<input type="checkbox"/> ...are acknowledged.	<input type="checkbox"/> ...are acknowledged.	<input type="checkbox"/> ...is acknowledged.
<b>PROFICIENT (2)</b>	<input type="checkbox"/> ...is supported with examples.	<input type="checkbox"/> ...are developed through examples.	<input type="checkbox"/> ...are developed through examples.	<input type="checkbox"/> ...is developed through examples.
<b>ADVANCED (3)</b>	<input type="checkbox"/> ...is analyzed and/or interrogated.	<input type="checkbox"/> ...are analyzed to thoroughly develop ideas.	<input type="checkbox"/> ...are analyzed to thoroughly develop ideas.	<input type="checkbox"/> ...is analyzed in a way that expresses the need for respectful engagement.