

**General Education Assessment Report  
2022**

Written Communication and Quantitative Reasoning  
Assessed in 2021-22  
According to the General Education Assessment plan

Provided to the General Education Board  
by Dr. Helen Caprioglio

## General Education Assessment Report 2022

### GENERAL EDUCATION ASSESSMENT PROCESS & RUBRICS

The General Education [Assessment Plan 2021-2026](#) was developed by the General Education Board and approved in 2021. This plan includes the assessment of ten skills outcomes, two each year on five-year cycle. The first assessment was done in 2021-22. The assessment uses VALUE rubrics developed by AAC&U, as modified by the Colorado Department of Higher Education (CDHE) General Education Council for use in Colorado GT Pathways assessment.

A CSU Pueblo summer 2021 faculty task force provided suggestions of possible artifact types for use. Faculty were to provide student learning artifacts from their courses which demonstrate the outcomes scored by the appropriate rubric. These artifacts were then to be collected and a sample of them scored by peer faculty to provide data on student performance.

Two skills outcomes, [Written Communication](#) and [Quantitative Reasoning](#), were assigned for assessment in the first year. The specific criteria scored are:

#### Written Communication Rubric

- Employ Rhetorical Knowledge

- Develop Content

- Apply Genre and Disciplinary

- Use Sources and Evidence

- Control Syntax and Mechanics

#### Quantitative Literacy Rubric

- Interpret Information

- Represent Information

- Perform Calculations

- Apply and Analyze Information

- Communicate Using Mathematical Forms

- Address Assumptions (Required of statistics courses only)

Table 1 shows the Gen Ed courses for which student artifacts were requested in 2021-22. Also indicated is the number of artifacts provided by instructors of sections of each course, the number found to be appropriate for scoring, and actual number scored.

Note: sampling in English composition courses was pre-sampled to reduce quantity of artifacts for collection. Instructors were requested to submit the papers for one quarter of each section with an ODD number CRN by taking work from the 1<sup>st</sup> student on the roster, then the 5<sup>th</sup>, 9<sup>th</sup>, 13<sup>th</sup>, 17<sup>th</sup>, as appropriate for the particular total enrollment present in each section. For the sections with EVEN number CRN, they were to take work for the 3<sup>rd</sup>, 7<sup>th</sup>, 11<sup>th</sup>, 15<sup>th</sup> and 19<sup>th</sup> students on the roster.

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**Table 1. Courses to be assessed AY 2021-22 and number scored:**

<b>Written Communication (SPRING 2022)</b>	<b>Course</b>	<b># of artifacts submitted</b>	<b># artifacts scored</b>	<b>type of artifact</b>
Composition	ENG 101	49?	36	Paper
	ENG 102	65?	29	Paper
	ENG 115	5	5	Letter
	ENG 116	0		
	ENG 117	7	7	Annotated bibliography
Humanities (GT-AH2 Literature & Humanities)	ENG 130	9	9	Paper
	ENG 220/ CS 220	15	15	Paper
		<b>TOTAL</b>	<b>101</b>	

<b>Quantitative Reasoning/ Literacy</b>	<b>Course</b>	<b># of artifacts submitted</b>	<b># artifacts scored</b>	<b>type of artifact</b>
Mathematics (FALL 2021)	MATH 101	0		
	MATH 109	3	3	Assignment
	MATH 120	0		
	MATH 156	48	48	Exam
Natural & Physical Science (SPRING 2022):	BIOL 100/L	7	7	Lab report
	BIOL 121/L	0		
	BIOL 181L	30	29	Lab report
	BIOL 182/L	9	9	Lab report
	BIOL 201/L	0		
	BIOL 202/L*	4*	4	Power point slides
	BIOL 223/L	28		Online lab printout
	BIOL 224/L	37		Online lab printout
	CHEM 101/L	0		
	CHEM 111/L	39	29	Exam pages
	CHEM 121/L	0		
	CHEM 122/L	0		
	CHEM 160/L	12	12	Exam
	GEOL 101/L	27	27	Lab assignment
	PHYS 110/L	0		
	PHYS 201/L	0		
	PHYS 202/L	0		
	PHYS 221/L	0		
	PHYS 222/L	0		
ANTH 101/L	0			
EPER 162/L	61	32	Lab report	
		<b>TOTAL</b>	<b>200</b>	

\*Group project submitted

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### ARTIFACT COLLECTION & SAMPLING

Denise Henry assisted faculty with collection of artifacts either through Blackboard assignment tagging or in hard copy. Helen reviewed submitted materials, verified applicability of rubric and provided the hard copies for scoring session. Courses with large numbers of artifacts were sampled by taking alternate students, etc.

### SCORING SESSION

Faculty were recruited to participate in the two-day artifact scoring session June 7-8, 2022. They were assigned to one of the groups based upon best match to their disciplinary expertise. Lynn Knight (Gen Ed Board Chair) gave the introduction to the process and rubrics. Rubrics have integer scores of 0-4, with gen ed level coursework (1<sup>st</sup> and 2<sup>nd</sup> year) expected to be at developmental levels. (a few scorers did use half points) Helen Caprioglio facilitated assignment of artifacts and collection of scoring data from use of VALUE rubrics. Three rounds of group scoring and discussion were held to increase interrater reliability. There were five scorers for Written Communication and six scorers for Quantitative Literacy. Scorers worked in pairs or one group of 3 to discuss scores for each artifact.

Two or three faculty members scored each artifact, discussed each one, and submitted independent scores. Scores were averaged on each artifact for analysis & reporting.

Scores were collected and collated to provide the reported results in average.

### OBSERVATIONS, COMMENTS & QUESTIONS

#### Choosing & collecting artifacts

1. Some courses/faculty did not provide any artifacts. Many sections didn't participate.
2. Some artifacts were not appropriate for the rubric. e.g computer printout of multiple choice answers and figure labeling.
3. Department needs to have the responsibility and understanding to provide artifacts. Takes time to get there.
4. What do faculty need to know ahead of time when developing assignment? (post rubrics, post gen ed rubric?).
5. Should students be able to see the rubrics?
6. Maybe need a culminating assignment to be used for this assessment.
7. Variability on how much latitude the student has in each assignment type.
8. Adjuncts need more support to facilitate this.
9. Labs: scientific thinking needs focus, not just discipline content. Especially focus on one idea versus random variation.
10. Logic and critical thinking are underrepresented. What is the definition? Need agreement on that.
11. This task is not defining an exam or assignment, just what piece of work is to be scored.

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### Scoring Sessions

12. Might need entire assignment for context, even if only one part is scored.
13. What were assignment directions and rubric? Information on the artifact would provide context for the scoring.
14. What does 'skillfully' mean? Verbiage is important.
15. Free-form inquiry based lab assignments are used, but if design isn't "right" does it get to the learning goals? Write-up may not include the details.
16. Health lab was hard to score. Found one exact copy between two sections!
17. Assessment scoring of one artifact. What about the whole course term? Are we getting to the outcomes?

### Future process ideas

18. Need to have meeting with faculty for next round...clearly explain the requirements and process, basic expectations. Early in fall, pre-plan and outcomes. Rolling event to keep it happening.
19. Faculty communication on this will be important...sharing session to help with choosing artifacts.
20. Ask departments/faculty to provide artifacts that align well with the rubric.
21. Maybe create a Gen Ed "handbook" with rubric pdf files, easy access, perhaps a physical version, not just electronic.

### **REFERENCED DOCUMENTS:**

General Education Assessment Plan:

<https://www.csupueblo.edu/assessment-and-student-learning/doc/general-education-assessment1/general-ed-assessment-plan-2021.pdf>

VALUE Rubrics modified by CDHE:

[https://cdhe.colorado.gov/sites/highered/files/Competency\\_Written\\_Communication.pdf](https://cdhe.colorado.gov/sites/highered/files/Competency_Written_Communication.pdf)

[https://cdhe.colorado.gov/sites/highered/files/Competency\\_Quantitative\\_Literacy.pdf](https://cdhe.colorado.gov/sites/highered/files/Competency_Quantitative_Literacy.pdf)

[https://cdhe.colorado.gov/sites/highered/files/Competency\\_Inquiry\\_and\\_Analysis.pdf](https://cdhe.colorado.gov/sites/highered/files/Competency_Inquiry_and_Analysis.pdf)

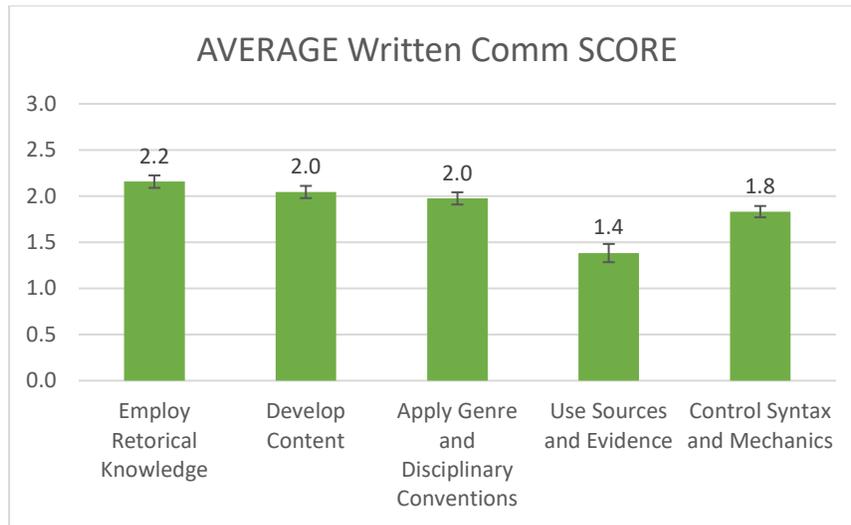
[https://cdhe.colorado.gov/sites/highered/files/Competency\\_Oral\\_Presentational\\_Comm.pdf](https://cdhe.colorado.gov/sites/highered/files/Competency_Oral_Presentational_Comm.pdf)

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### RESULTS

#### Written Communication

- a. Artifacts scored using VALUE Rubric. Average score on a scale of 0-4 across all written communication artifacts, with standard error.



- b. Average score by course.

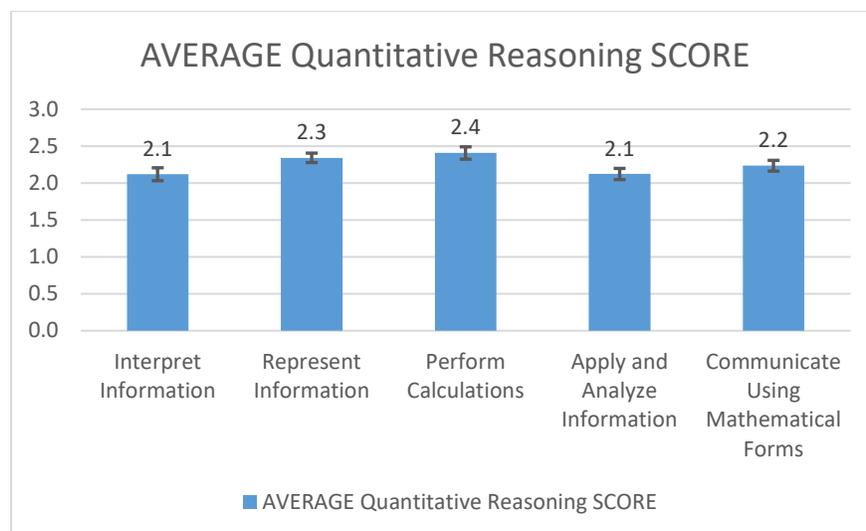
Course	Employ	Develop	Apply	Use	Control
<b>ENG 101</b>	1.9	1.8	1.8	0.9	1.8
<b>ENG 102</b>	2.2	2.1	2.0	1.9	1.8
<b>ENG 117</b>	2.5	2.5	2.4	2.4	2.3
<b>ENG 130</b>	2.3	1.8	1.8	0.1	1.8
<b>CS 220</b>	2.3	2.2	2.0	1.6	1.7
<b>ALL</b>	2.2	2.0	2.0	1.4	1.8

- c. Score averages overall vary across outcomes and show differences between courses. Courses submitted different types of artifacts.

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### Quantitative Literacy

- a. Artifacts scored using VALUE Rubric. Average score on a scale of 0-4 across all quantitative literacy artifacts, with standard error bars.



- b. Average score by course (those with N<5 excluded).

Course	Interpret	Represent	Perform	Apply	Commun.	Address
<b>Math 156</b>	3.0	2.7	3.5	2.8	3.2	2.0
<b>BIOL 100</b>	1.7	2.1	2.0	1.8	2.0	NA
<b>BIOL 181</b>	2.1	1.9	1.3	2.3	1.7	NA
<b>BIOL 182</b>	2.3	1.9	1.7	2.1	2.0	NA
<b>CHEM 111</b>	0.7	2.6	2.2	0.7	1.4	NA
<b>EPER 162</b>	2.3	2.2	2.3	2.1	2.2	NA
<b>CHEM 160</b>	2.0	1.6	1.8	1.9	1.6	NA
<b>GEOL 101</b>	1.7	2.5	2.7	2.5	2.4	NA
<b>ALL</b>	2.1	2.3	2.4	2.1	2.2	--

- c. Score averages overall are near 2.1 in all outcomes but show differences between courses. Courses submitted different types of artifacts.

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### ANALYSIS & “CLOSING THE LOOP”

Our Assessment Plan states:

Annual outcomes for the assessment process will address the following questions:

1. To what extent do CSUP students demonstrate the learning outcomes of our university’s General Education program?
2. What strengths or areas of improvement can be made to the assessment process based on the results derived from the rubric rating scales and applied back to the courses?
3. What recommendations are suggested for improving the General Education program based on the data from the analysis?

General Education faculty are now requested to review and interpret the results. Further suggested considerations:

1. How well did the artifact collection process work? How might it be improved next round?
2. What were the strengths and challenges with the scoring process itself?
3. What do the results suggest about the process overall?
4. How will these results be used by Gen Ed faculty to improve student learning? (How do we close the loop?)
5. What actions will be taken over next few years toward improvements?
6. Who will be responsible for accomplishing those actions?
7. Other Ideas?

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### GEN ED ASSESSMENT FOR 2022-23

The following courses will be assessed for [Inquiry & Analysis](#) or [Oral Communication](#):

Inquiry & Analysis	Courses
<b>Social Science (GT-SS1, GT-SS2, etc.)</b>	ECON 201
	ECON 202
	POLS 101
	POLS 201
	POLS 202
	SOC 201
	SW 205
	GEOG 103
<b>Natural &amp; Physical Science</b>	BIOL 100/L
	BIOL 121/L
	BIOL 181/L
	BIOL 182/L
	BIOL 201/L
	BIOL 202/L
	BIOL 223/L
	BIOL 224/L
	CHEM 101/L
	CHEM 111/L
	CHEM 121/L
	CHEM 122/L
	CHEM 125/L
	CHEM 160/L
	GEOL 101/L
	PHYS 110/L
	PHYS 140/L
	PHYS 201/L
	PHYS 202/L
	PHYS 221/L
PHYS 222/L	
ANTH 101/L	
EPER 162/L	

Oral Communication	Courses
<b>Humanities (GT-AH1 Arts &amp; Expression)</b>	ARH 211
	ARH 212
	ART 100
	ENG 114
	MUS 118
	SPN 130
	CID 103
	FRN 201
<b>Humanities World Language (GT-AH4)</b>	FRN 202
	GER 201
	GER 202
	ITL 201
	ITL 202
	SPN 201
	SPN 202
	WL 100
	ASL 101
	ASL 102
	ASL 201
	ASL 202
	FRN 101
	FRN 102
	GER 101
	GER 102
	ITL 101
	ITL 102
SPN 101	
SPN 102	