Fall 2021

General Education Assessment Report

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**Fall 2021
Overview of General Education Assessment**

At Washtenaw Community College (WCC), our general education outcomes are divided into six categories; two of these overarching categories are further divided into two divisions. Thus, this report summarizes our results across eight different groups of data. The various academic disciplines that teach the relevant coursework for each of these categories were asked to develop Performance Indicators (PI) for each of these outcomes.They then identified which of their respective courses address at least one or more of these performance indicators (see attached). In this report, we are discussing the assessments conducted most recently at WCC to determine how well each performance indicator was addressed and the results that were obtained. Below we list these six outcomes and their associated eight sets of performance indicators.

Category 1

<u>Writing Outcome</u>
Develop, organize, and express thoughts in writing using Standard English.

> Performance Indicators
> 1. Write a multi-paragraph essay/report that is clear, organized,complete and appropriate for the intended audience.
> 2. Respond to an idea in a thorough, logical, and credible manner.
> 3. Provide support for statements and/or opinions.
> 4. Write with minimal grammatical or mechanical errors.

Category 2

<u>Writing Composition/Communication Outcome</u>
Develop, organize, and express ideas in standard written English or verbal/non-verbalcommunication.

> **Division 1**: Written Composition Performance Indicators:
> 1. Write a competent, academic argumentative essay.
> 2. Demonstrate critical thinking skills applied to writing.

> **Division 2**: Verbal and non-verbal Communication Performance Indicators:
> 1. Prepare and deliver a researched, organized, and purposeful speech.
> 2. Speak clearly, succinctly, and appropriately before an audience.
> 3. Demonstrate critical and comprehensive listening through evaluating messages conveyed by others.

Category 3

<u>Mathematics Outcome</u>
Recognize the applications and perform computations using the concepts of college-level mathematics.

Performance Indicators
1. Interpret and draw inferences from mathematical models such as formulas, graphs, tables and/or schematics.
2. Represent mathematical information symbolically, visually,numerically and/or verbally.
3. Employ quantitative methods such as arithmetic, algebra, geometry or statistics to solve problems.

Performance Indicators
1. Interpret and draw inferences from mathematical models such as formulas, graphs, tables and/or schematics.
2. Represent mathematical information symbolically, visually, numerically and/or verbally.
3. Employ quantitative methods such as arithmetic, algebra, geometry or statistics to solve problems.

Category 4

<u>Natural Sciences Outcome</u>
Understand the principles and applications of modern science.

Performance Indicators
1. Recognize the principle concepts within a natural science discipline.
2. Use the scientific method to propose and test hypotheses through the interpretation of experimental data.
3. Apply the concepts of natural science to interpret observations and make inferences based on experimental results.
4. Recognize the impact and importance of sustainability in a field of science.

Category 5

Arts and Humanities Outcome
Understand concepts related to the nature and variety of the human experience throughliterature, language, communication, humanities, and the arts.

Performance Indicators
1. Recognize distinctive cultural perspectives and human experiences through the study of language, arts, works, and texts.
2. Identify the origin, context and value of works as they relate to their respective cultures.
3. Identify the work presented and the method, technique or concept utilized in the work.
4. Interpret and apply linguistic structures, idiomatic tools, and cultural cues for effective communication.
5. Communicate effectively using verbal and nonverbal discourse adapted for diverse audiences and purposes.

Category 6

Social and Behavioral Science Outcome
Understand principles and applications of social and behavioral science in exploring thedynamics of human behavior.

Division 1: Social Sciences Performance Indicators
1. Recognize the forms, functions and purposes of government.
2. Recognize the differences between peoples and cultures in past environments and how and why those cultures changed over time.

Division 2: Behavioral Sciences Performance Indicators
1. Recognize and apply psychological and sociological perspectives to the understanding of human behavior.
2. Distinguish between pseudoscientific approaches to attaining knowledge (anecdotal, evidence, rumors, and common sense) as compared with scientific approaches (theory-driven methods based on empirically-based data).
3. Recognize that human behavior is a function of the intersectionality of factors at both the micro and macro level.

Summaries of the General Education Assessment Results in Each Category

<u>**Writing Outcome**</u>

Develop, organize, and express thoughts in writing using Standard English.

Performance Indicators
1. Write a multi-paragraph essay/report that is clear, organized, complete and appropriate for the intended audience.
2. Respond to an idea in a thorough, logical, and credible manner.
3. Provide support for statements and/or opinions.
4. Write with minimal grammatical or mechanical errors.

Courses Assessed

Course Number	Course Name
ENG 100	Introduction to Technical and Workplace Writing
ENG 107	Technical Writing Fundamentals
ENG 111	Composition I

Population & Sampling

The population for this writing general education assessment is all students in the following courses: ENG 100, ENG 107, and ENG 111. A total of <u>1153 students</u> registered for all sections of these courses for Winter 2021.

For this assessment, a stratified sample of the final essay/project from ENG 100, ENG 107, and ENG 111 was used; **137 total student artifacts** were assessed: ENG 111 (117), ENG 107 (8), and ENG 100 (12). This is a sample size of **11.9%** of the total population.

Overall, having enough artifacts to assess in ENG 111 was a challenge, especially in the Virtual mode of classes. In most Virtual classes, English/Writing instructors carefully monitor their students' progress and assist them in whatever ways needed with their classroom work and Virtual Writing Center assignments. However, these students still needed to submit the samples for review to the Virtual Writing Center. Unfortunately, many students seemed to have problems accessing the Virtual Writing Center to turn in assignments, which may account for those who did not attempt to do the English 111 artifact (Writing Center assignment #10) for assessment. Nearly half of

the students assessed turned in the rough draft Writing Center assignment #9. Those who did turn in #9 scored   higher on Assignment #10 than those who did not. Therefore, the English Department should look at encouraging all students to submit Assignment #9 for feedback before submitting Assignment #10. Unfortunately, many students in the selected sections of ENG 111 did not submit the targeted assignment, which put the Department below the goal of assessing at least 20% of the population. For the next assessment, the English Department plans to choose additional random sections of ENG 111 to ensure a larger sample size, accounting for attrition (or even skipping of assignments).

Aggregate Results

Performance Indicator	ENG 100	ENG 107	ENG 111	All Courses
1	91.67%	100%	82.05%	84.6%
2	91.67%	100%	67.52%	78.7%
3	75%	75%	62.39%	64.7%
4	83.33%	75%	59.82%	63.2%

The assessment rubric included eight items that were aligned to specific performance indicators: Introduction (PI-2), Body Paragraphs (PI-3), Conclusion (PI-2), Sentence Styles/Structures (PI-1 & 2), Grammar (PI-4), Spelling/Word Usage (PI-4), In-Text Citations (PI-3 & 4), and Works Cited/References (PI-3 & 4). For each of the performance indicators, the standard used was that 70% of the students would score 75% or higher on the rubric.

ENG 100 & 107

Students exceeded the goal in all performance indicators. Therefore, no changes are proposed at this time.

ENG 111 Results and Plan of Action

PI-1: Write a multi-paragraph essay/report that is clear, organized, complete and appropriate for the intended audience.

The ENG 111 students only met the standard of success on one of the four performance indicators: PI-1. Since student performance exceeded the goal, no changes are considered at this time. They demonstrated the ability to write a multi-paragraph/report that was appropriate for the intended audience. The additional

criteria of clear, organized and complete were also met by 82.05% of the sampled population.

PI-2: Respond to an idea in a thorough, logical, and credible manner.

Student performance on PI-2 was close to the goal (67.52%) but still missed the target of 70% of the students would score 75% or higher This PI is related to the structure of the essay; students were required to have a minimum of five paragraphs, properly delineated, along with a proper introduction and conclusion as well as proper sentence/style structure. The Department needs to further investigate the problem areas to account for this lower success rate on this performanceindicator. Perhaps the instructional methods for sentence style/structure and the form ofintroductions and conclusions could be improved.

PI-3: Provide support for statements and/or opinions.

Student performance on PI-3 was also below the 70% of students goal with 62.39% of the students scoring 75% or higher. Although the smaller sample size may be part of the problem, citation formats (In-text and source list) were part of this performance indicator alignment in the rubric. Since that area was well below the standard of success in PI-4, this may account for the lower score in this area (PI-3) as well. This means that the Department must look at increasing effectiveness in instruction in these areas.

PI-4: Write with minimal grammatical or mechanical errors.

Student performance on PI-4 showed the most weakness (59.82%). This score represents a drop from 62% for the standard of success in the 2019 general education assessment report. This PI includes an assessment of in-text citations and source lists conforming to MLA/APA standards. Students definitely need more help with in-text MLA/APA citations. The English Department must look at how students are instructed/assessed within the various courses in these areas.

For the past five semesters, beginning March 2020, all face-to-face and mixed-mode courses were changed to a virtual format. This move to virtual courses was done within day in response to the Covid-19 pandemic. Approved online courses were unchanged. After assessing the artifacts, it appears that students' overall scores, for those who took virtual classes in general, were lower than students' scores for online classes. Given the nature of this change, many students and faculty struggled to acclimate to the new format as they were unprepared. This may have been a factor

contributing to the lower performance.   Perhaps adding more support for virtual class or allowing those classroom instructors to provide Writing Center feedback would help more students be successful.

Writing Composition/Communication Outcome

Develop, organize, and express ideas in standard written English or verbal/non-verbal communication

Division 1: Written Composition Performance Indicators
1. Write a competent, academic argumentative essay.
2. Demonstrate critical thinking skills applied to writing.

Courses Assessed

Course Number	Course Name
ENG 226	Composition II (Argumentative Writing)

Population & Sampling

The population for this writing general education assessment is all students in ENG 226. The total number of students registered for all sections of this course was **572 for Winter 2021**. For this assessment, 11 sections were randomly selected using an Excel random number generator tool. Sections of this course are capped at 20, so the target number was 220 students; however, there are usually a number of students who drop courses or do not successfully complete, especially in winter semester.

A final essay from each section was selected for assessment. One section had unusable data because there were no full analytical essays assigned. Other sections had less than 20 students complete the course or submit a final essay. Ultimately, **138 student artifacts** were assessed in 10 sections, which is a sample size of **24%** of the total population.

Results and Plan of Action

Performance Indicator	Rubric Items	Score
1. Write a competent, academic argument argumentative essay.	Introduction, Body Paragraphs, Conclusion, In-Text Citations, and Works Cited/References	78%
2. Demonstrate critical thinking skills applied to writing.	Evidence-Based Assertions, and Assertions Related to Thesis	93%

The goal of the assessment was that 70% of students would achieve 70% or better on each performance indicator. Overall, the results of the assessment indicate that for PI-1:Write a competent, argumentative essay, 78% of the students received 75% or better onthe rubric. For PI-2: Demonstrate critical thinking skills applied to writing, 93% of the students achieved 75% or better on the rubric. Although this goal was met, there is stillwork to be done.

PI-1: Write a competent, argumentative essay.

Students underperformed on rubric items for this performance indicator, even though we met the overall goal. There were five elements reviewed on the rubric for PI-1: Intro, Body Paragraphs, Conclusion, References/Works Cited, and In-Text Citations. The rubric required a minimum of four body paragraphs in each essay. Many students had only three. Many students met the other areas, so they averaged 75% or higher in this category even though they were missing a fourth paragraph.

Unfortunately, this indicates a specific gap in teaching and learning. Many students are not addressing the opposition in their essays (hence a minimum fourth paragraph). Even though a minimal number of students did address opposition in the body of paragraphs alongside their own point (as a point-counterpoint), this was not common. The English Department must discuss this and provide training to all faculty to stress the importance of this activity in argumentative writing.

PI-2: Demonstrate critical thinking skills applied to writing.

Students also underperformed in this area, even though we met the overall goal. Only 43% of the students got 100% in this area. There were two rubric lines: evidence-based assertions and assertions related to thesis. Many students achieved 50% or 75% in these areas, but since the two items were averaged, they still achieved over 75%. A key component to argumentative writing is using outside information to support assertions. If a key group of students are not consistently incorporating evidence into their arguments, the English Department needs to review how we are discussing using sources as well as how students are critiqued/encouraged to do so. Even though the goal in this area is 70%, students should strive to make all assertions in an argument based on evidence, not personal feelings. This is a staple of good argument but also of critical thinking.

Additionally, Performance Indicator #2 may not be adequately assessed by using the current rubric. The English Department needs to identify what constitutes "critical thinking skills" in argumentative writing for PI #2. The rubric items: were evidence-

based assertions and assertions related to thesis, but these were developed solely by the team lead. For future assessments, the department, as a unit, should discuss specific writing actions that can be identified as critical thinking.

Division 2: Verbal and Non-verbal Communication Performance Indicators
1. Prepare and deliver a researched, organized, and purposeful speech.
2. Speak clearly, succinctly, and appropriately before an audience.
3. Demonstrate critical and comprehensive listening through evaluating messages conveyed by others.

Courses Assessed

Course Number	Course Name
COM 101	Fundamentals of Public Speaking
COM102	Interpersonal Communication
COM 142	Oral Interpretation of Literature
COM 183	Persuasion
COM 200	Family Communication
COM 210	Nonverbal Communication
COM 225	Intercultural Communication

Population & Sampling

The population for this outcome is all students enrolled in the following courses:

COM 101	COM 200
COM 102	COM 210
COM 142	COM 225
COM 183	

The enrolled students in these sections totaled 1,039 students. A random sample of **241** students were randomly collected from all Communication courses/sections and modes offered at WCC in WI 2021. Informative and Persuasive speeches (all required research-based topics) were used as artifacts in this assessment. Every fifth student appearing on each section's course roster, who completed the assignment, was assessed. If a section was too small in enrollment to achieve an adequate number of students, every third student was selected from the rosters. This sample totaled approximately **23%** of all students enrolled in COM courses in WI 2021.

Results and Plan of Action

Success is defined as 70% of all respondents scoring 2 or 3 (average or superior) on the rubric (which is a 4 point scale 0-3) in each of the performance indicators. A rating of superior equates to a 90% or higher. A rating of average equates to a 75% or higher.

Performance Indicator	Rubric Item	Score
1. Prepare and deliver a researched, organized, and purposeful speech.	A. Preparation: Did the presentation contain evidence of advanced preparation?	95%
	B. Research: Did the presentation include citation of facts, data and/or quotes in the speech from published sources?	97%
	C. Organization: Were the ideas contained in the presentation well organized?	97%
	D. Purpose: Did the presentation contain a clear purpose?	98%
2. Speak clearly, succinctly, and appropriately before an audience.	A. Was the student's delivery effective?	95%
	B. Did the presentation meet the time limit (i.e. succinct)?	94%
	C. Were the use of vocal/nonverbal dynamics appropriate and effective for the audience?	94%
3. Demonstrate critical and comprehensive listening through evaluating messages conveyed by others.	A. Did the listener provide critical analysis in response to a speaker's message?	95%
	B. Did the listener demonstrate comprehensive listening in response to a speaker's message?	96%

It is gratifying and exciting to see the standard of success achieved by students taking all COM Courses at WCC exceeded the threshold of success. However, it is clear there is room for a few minor improvements in order to increase the number

of students achieving a score of 3, versus 2, on the rubric. The recommended areas for improvement include the following:

1. Place more emphasis on supporting students with increasing achievement at the highest level in Performance Indicator 2 - "including research material/citation of facts and quotes within the presentation". Students in the Interpersonal Communication Sections achieved 67% in the highest level of the rubric for this performance indicator, which was the lowest level of achievement compared to any other Course.

2. Under the second Performance Indicator, "Was the Student's delivery effective?" students in COM 102 collectively scored 2 and 3 at a 90% level of achievement, however, only 61% of the students scored a 3 in this area. This was the lowest level of achievement for this Performance Indicator, compared to any other Course.

3. In COM 102, Students achieved threes on the rubric at a 60% level of success and a 63% level of success respectively, on the third outcome dedicated to measuring Listening effectiveness during presentations. In COM 225, it is noted that only 25% of the students scored a two on the second portion of the third Performance Indicator for Listening: "Listening in response to the presentations of others" and all other students fell below the 70% level of achievement in this area.

Mathematics Outcome

*Recognize the applications and perform computations using the
concepts ofcollege-level mathematics.*

Performance Indicators
1. Interpret and draw inferences from mathematical models such as formulas, graphs, tables, and/or schematics.
2. Represent mathematical information symbolically, visually, numerically, and/or verbally.
3. Employ quantitative methods such as arithmetic, algebra, geometry, or statistics to solve problems.

Courses Assessed

Course	Performance Indicator
MTH 125 Everyday College Math	1, 2, 3
MTH 191 Calculus I	1, 2, 3
MTH 197 Linear Algebra	1, 2, 3

Population & Sampling

The population for Mathematics general education assessment is all students in the following courses:

MTH 125 Everyday College Math
MTH 160 Basic Statistics
MTH 176 College Algebra
MTH 178 General Trigonometry
MTH 180 Precalculus

MTH 191 Calculus I
MTH 192 Calculus II
MTH 197 Linear Algebra
MTH 293 Calculus III
MTH 295 Differential Equation

A stratified sample, consisting of the courses MTH 125 (Everyday College Math), MTH 191 (Calculus I), and MTH 197 (Linear Algebra) was chosen. MTH 125 is the math department's quantitative reasoning course, and offers a large number of sections. It is a terminal course taken by many students to fulfill the General Education math requirement, who do not need any more math for their program. MTH 191 is a mid-level course and MTH 197 is an upper level course, both in the algebra-calculus sequence taken by students in STEM programs. These 3 courses give a representative sample of the population.

The math department uses common final exams for all course assessments, and these common finals were also used for the general education assessment. All sections of each respective course are given the same final exam.

Results and Plan of Action

General education assessment in the math department is embedded into course assessment. Course mentors choose a measure of success for their course assessments, which then propagate to general education assessment. As such, there are sometimes differences in the measures of success from course to course.

The standard of success for MTH 125 was 70% of students will score 70% or higher on the questions associated with each performance indicator. The standard of success for MTH 191 was 70% of students will score 80% or higher on the questions associated with each performance indicator. Lastly, the standard of success for MTH 197 was 70% of students will score 75% or higher on the questions associated with each performance indicator.

The standard of success was met in all performance indicators, in all three courses assessed, as indicated in the aggregate table below. Note: "Success rate" is defined to be the proportion of students who scored 70% (MTH 125), 75% (MTH 197), 80% (MTH 191), or higher on the final exam questions used to measure the given performance indicator.

Aggregate Success Rates

Performance Indicator	MTH 125 Everyday College Math	MTH 191 Calculus I	MTH 197 Linear Algebra
1	96%	85%	96%
2	88%	83%	99%

3	95%	87%	97%

The standard of success was exceeded by quite a bit in each course, for all performance indicators (note we are comparing the percentages in the table above to 70%). Interestingly, much of the data used in this assessment is from the pandemic era (Winter 2020 and later), and though we might expect student performance to have dropped, the opposite appears to be the case. The worst (though still relatively high) performance was in MTH 191, which used pre-pandemic data from 2019.

The math department continues to work on ways to assess general education performance indicators as efficiently and accurately as possible. Embedding general education assessment into course assessment by using the same instrument (common final exams) for both was a good first step. A next step is to adapt the final exam to better measure general education performance indicators, or perhaps develop a different (but still embedded into course products like graded assignments) instrument for general education assessment.

Natural Sciences Outcome

Understand principles and applications of modern science.

Performance Indicators:
1. Recognize the principle concepts within a natural science discipline.
2. Use the scientific method to propose and test hypotheses through the interpretation of experimental data.
3. Apply the concepts of a natural science to interpret observations and make inferences based on experimental results.
4. Recognize the impact and importance of sustainability in a field of science.

Courses Assessed

Course	Performance Indicator
CEM 111 General Chemistry I	1, 2
BIO 101 Concepts of Biology	2
BIO 104 Biology of Exercise	3
BIO 110 Intro to Exercise Science	3
GLG 100 Intro to Earth Science	4
ENV 101 Environmental Science I	4

Population & Sampling

The population for Natural Science general education assessment is all students in thefollowing courses:

ANT 245 Biological Anthropology	CEM 105 Fundamentals of Chemistry
AST 111 General Astronomy	CEM 111 General Chemistry I
BIO 101 Concepts of Biology	CEM 122 General Chemistry II
BIO 102 Human Biology	CEM 140 Organic Biochemistry
BIO 104 Biology of Exercise	CEM 211 Organic Chemistry I
BIO 107 Introduction to Field Biology	CEM 222 Organic Chemistry II

BIO 109 Essentials of Human Anatomy and Physiology	ENV 101 Environmental Science I
BIO 110 Introduction to Exercise Science	ENV 105 Introduction to Environment and Society
BIO 111 Anatomy and Physiology - Normal Structure and Function	GLG 100 Introduction to Earth Science
BIO 142 Fundamentals of Nutrition, Exercise and Weight Control	GLG 103 Field Geology
BIO 161 General Biology I Ecology and Evolution	GLG 104 Weather
BIO 162 General Biology II Cells and Molecules	GLG 110 Geology of the National Parks and Monuments
BIO 201 Physiology of Exercise	GLG 114 Physical Geology
BIO 208 Genetics	GLG 125 The Earth Through Time
BIO 212 Pathophysiology: Alterations in Structure and Function	GLG 276 Principles of Geographic Information Systems
BIO 215 Cell and Molecular Biology	PHY 105 Conceptual Physics
BIO 225 Tests and Measurements in Exercise Science	PHY 111 General Physics I
BIO 227 Biology of Animals	PHY 122 General Physics II
BIO 237 Microbiology	PHY 211 Analytical Physics I
CEM 101 Introductory Chemistry	PHY 222 Analytical Physics II

For this assessment, a representative sample of courses was chosen (see Courses Assessed above). All students in all sections of these courses during the Fall 2020 semester were included in the assessment, except where data could not be collected(i.e. the students did not participate in the assessment activity). The table below summarizes the sample.

Course	Number of Students
CEM 111 General Chemistry I	179
BIO 101 Concepts of Biology	299
BIO 104 Biology of Exercise	38
BIO 110 Intro to Exercise Science	24
GLG 100 Intro to Earth Science	205

ENV 101 Environmental Science I	135
Total Sample Size:	880

Results and Plan of Action

All four Performance Indicators were assessed using embedded assessments within a spectrum of classes in the Natural Sciences: Biology, Chemistry, Physics, Environmental Sciences, and Geology.

The following table summarizes the findings:

Performance Indicator	How Assessed	Standard of Success	Student Performance	Was Standard Met?
1. Recognize principle concepts within a natural science discipline.	Final Assessment Exam, CEM 111.	75% of students score 70% or better.	86% of students scored 70% or better.	Yes
2. Use the scientific method to propose and test hypotheses through the interpretation of experimental data.	Lab report, BIO 101.	70% of students score 70% or better.	86% of students scored 70% or better.	Yes
2. Use the scientific method to propose and test hypotheses through the interpretation of experimental data.	Lab report, CEM 111.	75% of assessed students score 70% or better.	64% of students scored 70% or better.	No
3. Apply the concepts of a natural science to interpret observations and make inferences based on experimental results.	Scientific article, discussion board responses, BIO 104.	70% of students score 70% or better.	79% of students scored 70% or better.	Yes

3. Apply the concepts of a natural science to interpret observations and make inferences based on experimental results.	Scientific article, discussion board responses, BIO 110.	70% of students score 70% or better.	70% of students scored 70% or better.	Yes
4. Recognize the impact and importance of sustainability in a field of science.	UN Sustainability activity, ENV 101.	70% of students score 70% or better.	91% scored 70% or better	Yes
4. Recognize the impact and importance of sustainability in a field of science.	Water Sustainability paper, GLG 100.	70% of students score 70% or better.	96% scored 70% or better	Yes

Performance Indicator 1:

In 2018, there was a suggestion that next time (i.e. 2021) Performance Indicator 1 should be assessed using a broader selection of courses and sections. We did not do that because there is less comparability when you assess via a different instrument. However, there could be a concern that the Performance Indicator has not been adequately examined. In that case, the next assessment could recruit an additional course for this Performance Indicator. That said, no course-level changes were proposed in 2018 nor in 2021.

Performance Indicator 2:

In 2018 the standard of success was met for this Performance Indicator in both courses used to assess the Performance Indicator. No course-level pedagogical changes were suggested in 2018. In 2021, there are no suggested changes for the BIO course because the standard of success was met. For CEM, the standard of success was not met, and Dr. Schwab plans to share her fine-grained analysis of the lab reports with the instructors involved. They will be able to see how their students performed in each part of the lab report and compare that to students taught by other (anonymized) instructors.

Performance Indicator 3:

In 2018 the standard of success was met for this Performance Indicator. No pedagogical changes were suggested in 2018. The same courses were assessed in 2021 and again the standard of success was met. The only change that could be considered is to assess this Performance Indicator later in the semester, because

students build skill in this area over the course of the semester.

Performance Indicator 4:

In 2018 the standard of success was met for this Performance Indicator. No pedagogical changes were suggested in 2018. The same courses were assessed in 2021 although in ENV101 a new assignment was used. Students were successful on this Performance Indicator and no pedagogical changes are proposed.

In sum: These results are very similar to the Gen Ed assessment exercise conducted in 2018. The standard of success was met for all four Performance Indicators in both 2018 and 2021. One difference in 2021 is that the standard of success was not met among a subset of CEM 111 students who were assessed for Performance Indicator 2.

Anne Heise suspects that assessments from the high-altitude perspective of General Education are unlikely to move individual instructors to modify their courses. Rather, course-level assessments offer a more appropriate look at what our students are doing well at, and what they are not. In particular, the cell-by-cell rubric analysis that was done for Performance Indicator 1 gives each instructor extremely targeted feedback.

All assessments here are based on student performance in Fall 2020, when all courses were 100% remote due to Covid-19. It is unknown to what extent 100% remote lecture and lab affected student performance.

Nevertheless, this General Education assessment exercise does confirm that students who take Natural Science courses will have an excellent opportunity to understand principles and applications of modern science.

Arts and Humanities Outcome

Understand concepts related to the nature and variety of the human experience through literature, language, communication, humanities, and the arts.

Performance Indicators
1. Recognize distinctive cultural perspectives and human experiences through the study of language, arts, works, and texts.
2. Identify the origin, context and value of works as they relate to their respective cultures.
3. Identify the work presented and the method, technique or concept utilized in the work.
4. Interpret and apply linguistic structures, idiomatic tools, and cultural cues for effective communication.
5. Communicate effectively using verbal and nonverbal discourse adapted for diverse audiences and purposes.

The Arts and Humanities outcome is one of the most challenging to assess as the courses that are designated to fulfill this requirement span across twenty-three (23) different disciplines and four (4) distinct departments.

Population & Sampling

The population for arts and humanities general education assessment is all students enrolled in the following courses:

ARB 111, 122	ART 130/131/143/150
CHN 111, 122, 201	COM 101, 102, 130, 142, 200, 225, 183, 210
DAN 180	DRA 180
ENG 140, 160, 170, 181, 200, 208, 209, 218, 211, 212, 213, 214, 222, 223, 224, 240, 242	FRN 111, 122
GDT 100	GRM 111, 122
HUM 101, 102, 103, 145, 146, 175, 189	MUS 140, 142, 180
PHL 101, 123, 200, 205, 240, 244, 245, 250	PHO 103
SPN 111, 122, 202, 202, 205, 224	

The number of total enrolled students is 2889. The total number of student artifacts assessed is **548** (**18.9%** of the total population).

Courses Assessed

Course Number	Course Name	Instrument (Artifact)
ART 143	African American Art & Culture	Writing Sample
COM 101	Fundamentals of Speaking	Student Presentation
COM 183	Persuasion	Student Presentation
ENG 200	Shakespeare	Writing Sample
ENG 242	Diverse Children's Literature	Writing Sample
HUM 102	Introduction to the Humanities:Renaissance to Modern	Writing Sample
HUM 175	Arts & Cultures of Islam	Writing Sample
MUS 140/142	Music Theory I & II	Written Response
MUS 180	Music Appreciation: Our MusicalWorld	
PHL 101	Introduction to Philosophy	Writing Sample
PHL 200	Existentialism	Writing Sample
PHL 244	Ethical & Legal Issues in HealthCare	Writing Sample
PHO 103	History of Photography	
SPN 111	First Year Spanish I	Written/Verbal Student Response
SPN 122	First Year Spanish II	Written/Verbal Student Response

The Humanities, Languages, and the Arts Department attempted to create a representative sample pulling from all the different disciplines falling under the Humanities General Education area. Fifteen (15) out of 23 disciplines were captured (approximately 58%). This is a great improvement from the 2018 assessment, where only 26% of the disciplines were represented.

Results and Plan of Action

Because of the variety of courses and disciplines, various types of artifacts were used: writing samples, written or verbal student responses, student presentations, and visual art projects. However, a common rubric was used for all artifacts. The standard of success was that 70% would achieve 70% or better on the assessment tool, according

to the rubric. Scores of 3 or 4 (on a scale of 1-4), indicated meeting the standard of success.

Aggregate Success Rates

Performance Indicator	ENG 200	ENG 242	MUS 180	ART 143
1	97%	93%	83%	63.6%

Performance Indicator	ENG 200	ENG 242	MUS 180	PHO 103	HUM 102	HUM 175
2	93%	93%	75%	80.7%	82.3%	61.5%

Performance Indicator	ENG 200	ENG 242	MUS 140/142	PHL 101	PHL 244	PHL 200	PHO 103
3	93%	80%	93.7%	75.7%	84.7%	75%	84.6%

Performance Indicator	SPN 111	SPN 122
4	87.5%	79.1%

Performance Indicator	COM 101	COM 183	PHO 103
5	91.8%	93.7%	83.3%

The standard of success was achieved for all performance indicators. Although ART 143 was below the goal (63.6%), the average across all four courses was 84.15% which exceeded the goal for PI-1. In addition, HUM 175 was also below the goal (61.5%), but the average across the six courses was 80.9%, well above the goal for PI-2. Perhaps teaching during COVID might account for the low performance in these courses. Since the average score for each PI met the goal, at this time, no changes are recommended.

Social and Behavioral Science Outcome

Understand principles and applications of social and behavioral science in exploring the dynamics of human behavior.

Division 1: Social Sciences Performance Indicators

1. Recognize the forms, functions and purposes of government.
2. Recognize the differences between peoples and cultures in past environments, and how and why those cultures changed over time.

At Washtenaw Community College, the "social sciences" are located in one department—Social Science. It comprises several disciplines: history, political science, geography, economics, and anthropology.

Population & Sampling

The population for social science general education is all students enrolled in the following courses:

ANT 201	ANT 202	ANT 205
ANT 265	ECO 110	ECO 211
ECO 222	GEO 101	HST 108
HST 121	HST 122	HST 123
HST 150	HST 200	HST 201
HST 202	HST 220	HST 225
PLS 112	PLS 241	

The Social Science Department offered <u>66 course</u> sections during the Winter 2021 semester. A random sample of **26** these were chosen for assessment using the random number generator function in Excel. The sample is representative of the department's offerings across all meaningful spectra. It includes day, afternoon, and evening classes. It includes synchronous and asynchronous sections. It samples all disciplines, and it includes sections taught by full-time and part-time faculty.

Course Number	Course Name
ANT 201	Introduction to Cultural Anthropology
ANT 202	Introduction to Physical Anthropology
ANT 205	Introduction to Archaeology
ECO 211	Principles of Economics I
ECO 212	Principles of Economics II
GEO 101	World Regional Geography

HST 108	The Ancient and Medieval World
HST 121	Ancient and Medieval Europe
HST 201	U.S. History to 1877
HST 202	U.S. History Since 1877
PLS 112	Introduction to American Government

Course instructors cooperated to develop assessment questions that were embedded in quizzes and exams. In most cases, these were objective questions, but several instructors opted to use essay questions instead. All assessment tools and their associated rubrics are included in uploaded files along with performance indicator-level and course-level data files.

Results

Performance Indicator	ECO 211	ECO 222	PLS 112
1	71.28%	75%	90%

Performance Indicator	ANT 201	ANT 202	ANT 205	GEO 101	HST 108	HST 121	HST 201	HST 202
2	71.3%	75%	90%	70.3%	93.8%	89%	85.7%	78%

The Social Science Department adopted a uniform standard of success. A course was adjudged to have met the standard if 70% of the students who took the assessment scored 70% or better.

Departmental Results for Performance Indicator 1

PI-1: Recognize the forms, functions, and purposes of government.

Eleven sections of ECO 211, ECO, 222 and PLS 112 were assessed to determine whether students did indeed "recognize the forms, functions, and purposes of government. Of the 231 students who completed the assessment, 78.92% (or 182 students) scored 70% or better. Therefore, these social science classes are broadly meeting the standard of success. There was, however, considerable variance in individual courses that met the standard of success.

PLS 112 Results and Plan of Action

PLS 112 met the standard robustly. More than 90% of the students in these sampled sections scored better than 70%, with an average score of better than 85% across the 15 questions of the assessment tool for this class. Although the majority of students assessed did well when it came to learning the forms, functions, and purposes of government, the analysis of the results on individual items in the instrument did identify two problem areas in particular that need to be addressed in the future.

1. Students in all three sections struggled with distinguishing the comparative nuances among the different forms of democracy. The problem could be that all students were online this semester. In a face-to-face class, students can be assessed on the spot to see if they understand the material. In the future, online instructors will need to work in "check points" after each module to determine if students are actually watching the lectures and understanding the material presented. Blackboard allows instructors to determine how much time individual students spend watching the lectures. Students who are identified as not spending enough time with the lectures will be contacted and reminded of the importance of doing so. Students will also be given short assignments/quizzes to determine their understanding of the material so instructors can follow up with supplemental explanations and/or materials if necessary.

2. Some students also struggled with understanding the arguments presented in important primary source materials, in particular The Federalist Papers. These readings are a tough read for today's students, but they are important. In the future, students will also be provided with audio versions of these readings so they can follow along with the text. Mini-lectures will be provided if assessment tools indicate students are struggling with this material.

ECO 211 Results and Plan of Action

Performance Indicator 1 results were least robust for ECO 211. Of the 94 students assessed, 67 scored better than 70% on this 10-question assessment tool. This corresponded to a 71.28% success rate. In one sense then, students in this class met the standard of success. Nevertheless, success rates were quite variable across the 10 questions in the tool with students scoring above 90% on questions 4, 7 and 10. However, students scored in the 40%-60% range on questions 3, 6, and 9. This indicates at least 3 areas for improvement:

1. Students displayed a troubling lack of understanding of the basic purpose behind government interventions in individual markets with floors and ceilings. Thus, while

they seem to do well identifying floors and ceilings and explaining their effects on exams, the basic rationale for their existence seems less clear to them. Additional emphasis will be placed on the "why" aspect of floors and ceilings in the future to go along with the "how" aspect of their operation. Questions will be added to online practice exercises to emphasize the rationale behind these market interventions.

2. Students had trouble identifying the most commonly used money supply control tool in the Fed's arsenal. This is particularly perplexing as this point is emphasized almost to the point of absurdity in ECO 211. When the tool was developed, instructors felt this was almost too easy. It essentially qualified as a "gimme" question. Given the heavy emphasis on open market operations as the Fed's favorite tool already, it is hard to see how more can be done here. This will further require investigation before a solution can be proposed.

3. Finally, students failed to recognize the role taxes play in stabilizing the business cycle. This is somewhat less surprising as this comes from material covered at the very end of the course. As a result, it is sometimes given short-shrift by instructors running out of time at the end of the semester. The economics faculty will consult and decide whether this material is important enough to be nudged forward on the syllabus so that it is less likely to be given a cursory treatment.

ECO 222 Results and Plan of Action

Performance Indicator 1 results were somewhat stronger for ECO 222. Of the 56 students who were assessed 42 scored 70% or better. This corresponded to a 75% success rate. Success rates on the 10-question assessment tool were more uniform here. Nearly all of the success rates were in the 80-90% range across the 10 questions. There were only two exceptions that point to potential problems:

1. Students seemed to lack a basic understanding of why we look unfavorably on monopoly power. This seems to be an issue of overcoming fundamental misconceptions that students bring with them to the class. Additional emphasis will need to be placed on the allocative inefficiency that arises as a result of monopoly power. Again, this is a matter of helping them understand the "why", not just the "what" or "how". Questions will be added to online practice exercises to emphasize the rationale behind these market interventions.

2. Students also seem to have some difficulty identifying a tax on producers. Although the students met the standard of success here, they did so marginally. Most of the trouble occurred in a single section of ECO 222. Thus, it seems likely that the best solution is to work with individual instructors to ensure that they are effectively

covering this topic. Full-time instructors will emphasize the importance of this topic and provide part-time instructors with practice materials for their students.

Departmental Results for Performance Indicator 2

PI-2: Recognize the difference between peoples and cultures, andidentify how, and why, those peoples and cultures have changed over time.

Fifteen sections of ANT, GEO, and HST were selected for assessment to determine whether students could "recognize the difference between peoples and cultures, and identify how, and why, those peoples and cultures have changed over time". Of the 273 students who completed the assessment, 84.25% (or 230 students) scored 70% or better. All of the courses that were assessed met the standard for success with much less variation than existed with the performance indicator 1 sample.

ANT 201, 202 and 205 Results and Plan of Action

Assessment of performance indicator 2 for Anthropology 201 (introduction to Cultural Anthropology), ANT 202 (Introduction to Physical Anthropology), and ANT 205 (Introduction to Archaeology) were determined using a seven (7) question multiple-choice quiz. All three courses were successful based on these criteria. The average scores for ANT 201, 202, and 205 were 6.68, 6.5, and 6.87 (out of 7) respectively. All three classes exceeded the standard of success (70% of students would score 70% or higher); for both ANT201 and ANT205 100% of students scored higher than 5 points on the assessment. Only ANT202 scored lower (83.33%), but this still significantly exceeded the threshold for success.

In all three classes 100% of students answered questions 1-3 correctly. In both ANT202 and ANT205, students also answered question 4 correctly, with ANT201 answering the same question correctly 97.06% of the time. As Questions 1-4 deal with culture, it is clear from these results that students understand what culture is, that it differs between societies, and that it affects individual behavior in an observable way. It is also clear that all three classes address culture as an important part of the human experience.

The results for Questions 5-7, which address gender, cultural change, and the impact of technology on culture, were mixed. In all three classes greater than 80% of students answered these questions correctly, while there was a noticeable bias by sub-field. Question 5, which dealt with gender, had the highest percentage of correct answers in ANT201 and ANT205, but the lowest percentage of correct answers in 202. This is not unexpected, as ANT202 deals primarily with concepts such as genetics, primates, and human evolution. Likewise, Question 6 (which addressed social change over the last 20,000 years) had its highest percentage of correct answers in ANT205, and the least in

ANT201 (which deals only superficially with human prehistory). This is also the case with Question 7, which addressed broad changes in subsistence caused by the shift to industrial production. While this concept is covered in all three classes it is emphasized most in ANT205.

In all three sections, greater than 70% of students scored 70% or higher on the assessment quiz, thus each class can be judged as a success with regards to the standard for success. It is clear, however, that students are not understanding the process and/or relevance of cultural change in each class as well as they understand basic ideas about the concept of culture itself. There are several ways that this might be addressed in ANT201 and ANT202. The first would be a supplemental reading that addresses cultural change; for ANT201 this might deal with the impact of new technologies on indigenous communities, while in ANT202 it could be an article about changes in gene frequencies because of the shift to agriculture and industrial production. A second method might be to introduce a short exercise/project in which students track a specific cultural change over time and explore the impact on norms and values caused by that change; for instance, the effect that mobile phones have had on education and human relationship.

GEO 101 Results and Plan of Action

Assessment or performance indicator 2 for GEO 101, was implemented using 4 questions that were embedded into class exams. Of the 64 students that were assessed, 70.31%, or 45 students, successfully met the performance standard. As a result, we can say that GEO met the standard for success, if not robustly. Performance across the assessment questions was largely uniform. Thus, the assessment questions did not identify weakness in any specific area. However, there was some variance in assessment results across sections. The specificity of the assessment questions may not have been a close match for the material as it was covered in one particular section. As a result, closer coordination of question selection between faculty and additional guidance for part-time faculty is likely to improve assessment results in the future.

HST 108 Results and Action Plan

Assessment of Performance Indicator 2 for HST 121 was implemented using an essay question embedded in the final exam. Students were asked to "Compare and contrast the development of societies in the Americas and sub-Saharan Africa in this period." In one essay and "Trace the development of either the Islamic world, India, China, or Europe in this period." in the other essay. Of the 16 students assessed, 93.75%, or 15 students, successfully met the standard of success. Students scored an average of 87%

and 86% respectively on the two essays. Thus, students robustly met the standard of success with no particular weaknesses being identified. Given the results of the assessment, no changes are envisioned to the course at this time.

HST 121 Results and Plan of Action

Assessment of Performance Indicator 2 for HST 121 was implemented using an essay question embedded in the final exam. Students were asked to compare and contrast the cultural advances of the High Middle Ages with those of the Renaissance. They were specifically asked to discuss and address education, literature, art, and architecture. Of the 27 students assessed, 89% or 24 students, successfully met the performance standard. As a result, we can say that HST 121 students robustly met the standard for success.

Despite the fact that the course robustly met the standard of success, the data show a noticeable disparity among the average scores for the four topics in the question. The average score for education is substantially lower than the other three topics. While reading the student essays, it became apparent that the reason for the lower average score for this topic is a general lack of understanding of Renaissance Humanism. As a result more time will be devoted to the discussion of Humanism in future HST 121 courses.

HST 201 Results and Plan of Action

Assessment of Performance Indicator 2 for HST 201 was implemented using 4 objective questions that were embedded in random blocks for quizzes and exams. Therefore, not every student received every question. Of the 70 students that were assessed, 85.71% (or 60 students) met the standard of success. Scores on individual questions ranged from 78.95% to 92.31%. Since students robustly met the standard of success with no particular weaknesses being identified, no changes are envisioned to the course at this time.

HST 202 Results and Plan of Action

Assessment of Performance Indicator 2 for HST 202 was implemented using 4 objective questions that were embedded in random blocks for quizzes and exams. Therefore, not every student received every question. Of the 41 students that were assessed, 78.05% (or 32 students) met the standard of success. Scores on individual questions ranged from 72.73% to 94.12%. Since students robustly met the standard of success with no particular weaknesses being identified, no changes are envisioned to the course at this time.

Division 2: Behavioral Sciences

Performance Indicators:

1. Recognize and apply psychological and sociological perspectives to the understanding of human behavior.
2. Distinguish between non-scientific approaches to attaining knowledge [anecdotal, evidence, rumors and common sense], pseudoscientific [grandiose claims consisting of flawed methodology, logical fallacies and invalid logic] as compared with scientific approaches [theory-driven methods based on empirically based data].
3. Recognize that human behavior is a function of intersectionality at both the micro and macro level.

Population & Sampling

The population for this outcome is all students enrolled in the following courses:

PSY 100	PSY 107	PSY 150	PSY 200
PSY 206	PSY 220	PSY 240	PSY 251
PSY 257	PSY 260	PSY 270	PSY 296
PSY 298	SOC 100	SOC 202	SOC 205
SOC 206	SOC 206	SOC 216	SOC 220
SOC 225	SOC 230	SOC 250	

The total population of students enrolled in psychology and/or sociology courses during the Winter 21 semester was 2,354; **531** were enrolled in the assessed courses (**23%** of the population).

The department's goal was to have a sample size representing 20% or at least 471 students; however, only 272 completed the assessment. The sample size of 272, was 11.5% of the population; the department did not meet the 20% goal. In reviewing the previous assessment reports, unfortunately 11.5% seems to be the mode. Overall, 66% of students enrolled in the randomly selected courses participated in general education assessment.

For the purpose of this assessment, 20% of 99 sections offered in the Winter of 2021 in Behavioral Sciences were randomly selected, resulting in 20 sections (14 psychology and 5 sociology) identified for assessment. Of the 20 selected, the assessment for 4 sections (3 psychology courses and 1 sociology course) was not administered. Therefore, the assessment report is based on 16 sections.

Courses Assessed

Course Number	Course Name
PSY 220	Human Development & Learning (2)
PSY 206	Life Span Development Psychology (5)
PSY 251	Education of Exceptional Children (1)
PSY 257	Abnormal Psychology (1)
SOC 100	Principles of Sociology (3)

For the first time, the entire department used an assessment instrument administered in Blackboard. A Blackboard test was created and distributed to all faculty via email. Participating faculty either uploaded the assessment to Blackboard themselves or the team leader was granted access to the courses to add the assessment as an individual test instrument. The assessment was labelled as extra-credit, and students were encouraged to take the exam by their individual instructors.

Results

Performance Indicator	Score
1. Recognize and apply psychologicaland sociological perspectives to the understanding of human behavior.	83%
2. Distinguish between non-scientificapproaches to attaining knowledge[anecdotal, evidence, rumors and common sense], pseudoscientific (grandiose claims consisting of flawed methodology, logical fallacies and invalid logic) as compared with scientific approaches (theory-driven methods based on empirically based data).	92%
3. Recognize that human behavior is a function of intersectionality at both themicro and macro level.	90%

The standard of success used for the behavioral sciences general education assessment was that 70% of students would achieve 70% or higher on the assessment tool. As noted above, students exceeded the targeted success rate for each performance indicator. Despite not meeting the 20% threshold, of the 51% (272) of students who completed the assessment, 97.5% scored 70% or higher on the assessment overall.

The PSY courses performed substantially higher than the SOC courses in terms of completion numbers as well as performance. Out of 119 SOC students enrolled in the randomly selected courses, 39% (47) completed the assessment as opposed to 55% (225) out of 412 PSY students who completed the assessment.

On **performance indicator 1**, 83% (272) of students scored 70% or better; exceeding the targeted 70% success rate. The department's courses seem to be presenting the psychological and sociology perspectives efficiently. Overall, students were able to recognize those perspectives and/or how they are applied to understand human behavior on the assessments. However, 97% (225) of PSY students scored 70% or higher as opposed to 15% (7) of the SOC students, coupled with a low completion rate among SOC students. The vast majority of SOC students (85%) did not meet the 70% threshold of the standard of success.

On **performance indicator 2**, 92% (252) of students scored 70% or better; exceeding the targeted 70% success rate. Students were able to distinguish between the three assessed approaches to acquiring knowledge. Of the PSY students, 99% (222) and 62% (29) of the SOC students scored 70% or higher for performance indicator 2.

On **performance indicator 3**, 90% (244) of students scored 70% or higher; exceeding the targeted 70% success rate. Students were able to recognize that human behavior is a function of intersectionality at both the micro and macro level. Of the PSY students, 98% (220) and 51% (24) of the SOC students scored 70% or higher for performance indicator 3.

Based on the results, the Behavioral Sciences Department needs to require the assessment activity in a manner which is both fair to students and valuable in assessing the department. One option is to increase the sample size to 30% from 20% of offered courses. In addition, there were a few hiccups in terms of ensuring all faculty uploaded and administered the assessment. However, the advantages of administering the assessment via Blackboard outweighed the disadvantages in the large scheme. In the future, the assessment will be embedded in the master course sites and it will be carried down when the course is copied.

Overall Conclusion

Much of the data for this assessment was collected during the pandemic. We might expect student performance to have gone down, but that does not appear to be the case. In fact in some areas, it actually went up.

There can be only speculation on why this is the case; anecdotally, many instructors made great efforts to go the extra mile in developing new forms of instruction (the "virtual class" at WCC in particular) and to help students adjust. It may also be the case That the assessment instruments, which are embedded into graded assignments, were made a little easier in order to offset some of the challenges of remote learning. Increased incidence of cheating could also be a factor, since more exams were delivered online (some with proctoring, some without, per the instructor's choice) during the pandemic. The bottom line is that, on average, the changes brought about by the pandemic do not seem to have adversely affected student learning as one might have expected.

In addition, the processes for General Education Assessment at WCC have been continuously improved due to involvement in the Assessment Academy. This report has been strengthened from the last cycle because faculty are better trained on using proper population sampling, collecting artifacts in a systematic way, creating authentic assessments, and analyzing the data they collect. Although there is much more to be done, the College has only had a formal process for collecting this information, using faculty-driven methods, for two years. It stands to reason that the College will continue to improve, especially with the introduction of using the Learning Management System (LMS) - Blackboard (Bb) to collect artifacts and the embedded Goal Performance tool that exists in Bb, which creates a more streamlined and efficient method for analyzing data related to specific test items and rubrics.