
*The Mesa Community College
Program to Assess Student Learning*

Annual Report AY 2021-2022

Prepared by:
Office of Institutional Effectiveness

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Mesa Community College is part of the Maricopa County Community College District,
an EEO/AA Institution

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I. Introduction and Background

History and Overview of Assessment

Mesa Community College (MCC) is committed to providing quality education for its students as evidenced in our institutional value, Learning - MCC champions individual student success that reflects the highest academic standards. The college recognizes the need for accurate assessment data to use in evaluating student learning and the effectiveness of the College in meeting its mission. MCC accepts the proposition that the value of assessment is found in the use of the assessment data to improve student learning.

The Student Outcomes Committee (SOC) is a faculty senate committee. The committee directs activities related to the implementation of MCC's Student Outcomes Assessment program. In the Fall of 2012, SOC created a Student Outcomes Committee Informed Improvement (SOCii) cluster. Informed improvement is an ongoing cycle of researching, planning, taking action, measuring and analyzing the impact, and making changes designed to increase student learning and success. Through the informed improvement project, SOCii used evidence-based decision-making to address the question:

How can the Student Outcomes Committee Informed Improvement Team facilitate the effective integration of general education outcomes assessment throughout all MCC programs and departments? (Fall 2012)

In researching the issue, the team attended several local and national conferences on assessment. Attendance to the conferences raised awareness as to the extent of course level assessment that was taking place across many colleges and institutions. Thus, confirming the need to revise our assessment methodology.

SOC and Faculty Senate approved a revision of the general education outcomes to better focus on student success. MCC's Student Learning Outcomes became MCC's 4Cs: Communication, Civic Engagement, Critical Thinking, and Cultural and Global Engagement, with each outcome having several criteria. MCC's 4Cs uses standardized scoring guidelines assessment instead of standardized assessment test. This allows instructors to apply the assessment results to their course content and pedagogical practice.

The transition from the old model of learning outcome assessment to the MCC's 4Cs assessment model allows all students to be assessed regardless of modality. The college will be able to accurately assess the outcomes and "close the loop" of improved instruction by having access to meaningful course, program, and college level performance data.

Organizational Structure for Assessment

The Student Outcomes Committee is composed of faculty from many disciplines, and confers regularly with the Faculty Senate. The Dean of the Office of Institutional Effectiveness (OIE), as well as the Director from the office, serves as a consultant to the committee to ensure that assessment processes and methodologies reflect good practice, including adherence to guidelines for ethical research.

Our process to assess student learning has engages full-time and part-time faculty through regular meetings of the committee, and through the participation of many academic and occupational faculty events.

II. MCC's 4Cs Development Process

The process began by following the informed improvement strategy. Each of the original student learning outcomes and descriptors were reviewed and evaluated. Common descriptors were eliminated while at the same time linking the new outcomes to the college's Vision, Mission and Value (VMV) statements. The linkage to the MCC's VMV insured fluid integration of institutional student learning outcomes into the college plan. MCC's 4Cs were created: Communication (CO), Critical Thinking (CT), Civic Engagement (CE), and Cultural and Global Engagement (CG).

Groups were formed for each outcome; faculty from both Southern and Dobson and Red Mountain campuses were invited, and participated, in the development of the outcomes clear definitions, the criteria to assess it and scoring guidelines. Scoring guidelines were patterned after the Association of American Colleges and Universities (AACU) and Valid Assessment of Learning in Undergraduate Education (VALUE) rubrics. On December 5, 2013 MCC's 4Cs were adopted by unanimous approval from Faculty Senate. MCC's 4C's development process shown below:

Figure 1

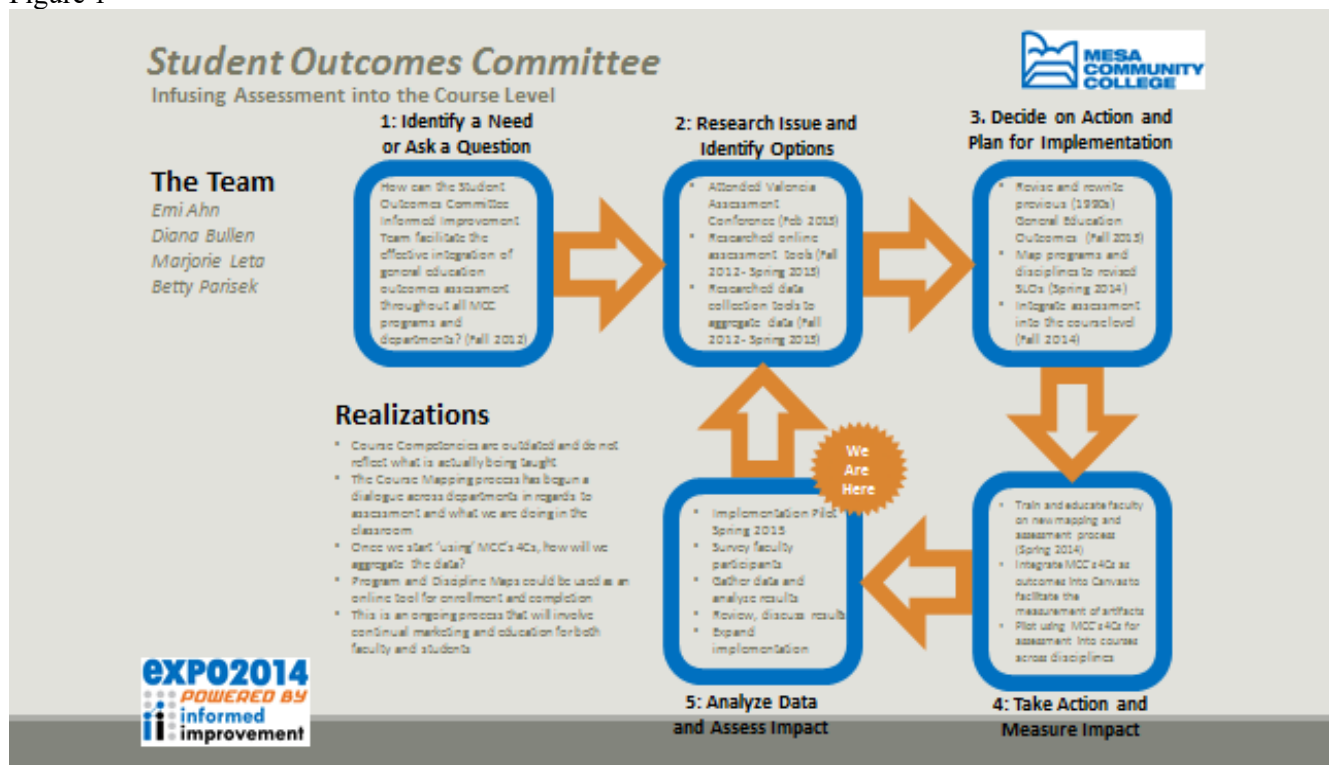


Figure 2

Mesa Community College: Institutional Student Learning Outcomes “MCC’s 4Cs”	
<p><i>The following Institutional Student Learning Outcomes are consistent with the Vision, Mission, and Values of both the Maricopa Community Colleges District and Mesa Community College, and reflect our commitment to Individual and Community, Innovation, Integrity, Learning, and Service Excellence.</i></p>	
<p>COMMUNICATION (CO) Institutional Learning Outcome: The purposeful development, expression and reception of a message through oral, written or nonverbal means.</p> <p>1. PURPOSE: Establish a clear central focus for a message which demonstrates an understanding of context, audience, and task 2. CONTENT: Develop appropriate, relevant content logically sequencing ideas and/or information 3. LANGUAGE: Apply language and/or modes of expression of a discipline in an appropriate and accurate manner to demonstrate comprehension 4. EXECUTION: Convey a message effectively</p>	<p>CIVIC ENGAGEMENT (CE) Institutional learning Outcome: Civic engagement encompasses actions to promote the quality of life in a community, through both political and non-political processes.</p> <p>1. INCLUSIVENESS: Demonstrate an ability to engage respectfully with others in a diverse society 2. APPLY KNOWLEDGE: Apply knowledge from one’s own study and experiences to active and ethical participation in civic life 3. DEMONSTRATION OF CIVIC IDENTITY AND COMMITMENT: Provide evidence of experience in and reflection on civic engagement activities 4. CIVIC COMMUNICATION: Communicate and listen to others in order to establish personal and professional relationships to further civic action 5. ENGAGEMENT IN CIVIC ACTION AND REFLECTION: Demonstrate the ability to deliberate and collaborate on issues and problems to achieve a civic aim</p>
<p>CRITICAL THINKING (CT) Institutional Learning Outcome: Habit of mind of analyzing issues, ideas, artifacts, events, and/or evidence to draw conclusions or solve problems.</p> <p>1. Identify the topic/ subject of inquiry 2. Select appropriate resources required to draw conclusion(s) or solve the problem 3. Apply resources to draw conclusion(s) or solve the problem 4. Evaluate conclusion(s) or the solution to the problem</p>	<p>CULTURAL AND GLOBAL ENGAGEMENT (CG) Institutional learning Outcome: Global Learning encompasses knowledge, skills, and attitudes students acquire through a variety of experiences that enable them to understand world cultures, analyze global systems, appreciate cultural differences, and apply this knowledge and appreciation to their lives as educated individuals and global citizens.</p> <p>1. KNOWLEDGE: Analyzes cultural systems, events, or creations and their relationship to worldviews, values, or behavior. 2. INFLUENCES: Evaluates the impact of contemporary and past events, perspectives, or cultures on intercultural relationships. 3. SELF AWARENESS: Analyzes the impact of culture and intercultural experiences on one’s worldview, values and behavior, including assumptions, biases, prejudices, or stereotypes. 4. RESPONSIBILITY: Evaluates the impact of one’s moral and ethical reasoning on one’s actions in relation to culturally different groups. 5. CULTURAL EXPRESSION: Generates ideas, creations, or models that express the human condition and one’s relationship with the world</p>
<p><i>Revised AY 2017-2018</i></p>	

III. Methodology

During the semesters of Fall 2021 and Spring 2022 (AY 2021-2022), SOC invited all residential, one year only, one semester only, and adjunct faculty to participate in MCC's 4Cs assessment. SOC members promoted participation in assessment activities, lead faculty through the assessment process, and provided guidance in the creation of a signature assignment aligning to the scoring guidelines.

Faculty participants identified a 'C' that best aligned with their course. The faculty chose an assignment within their course that aligned with all criteria of the chosen outcome. Faculty attached the 'C' scoring guidelines to the course assignment in Canvas. Using Canvas students assessed in a 'C' were given a rate of Levels 0 through 4, with level 4 being the highest level of achievement. The data collected in Canvas for each semester was exported, combined into one dataset, aggregated and analyzed using Excel, MCCCDC Institutional Research Information System (IRIS), and IBM SPSS Statistics.

College level and course level 'C' averages were calculated. The average scores range from zero to four, with four being the highest level of achievement.

The scoring guidelines were revised in AY 2017-2018 and implemented Fall 2018. Some faculty used the newly revised scoring guidelines and others used the prior set of scoring guidelines. When reporting average scores, only data from the new scoring guidelines were analyzed.

Data Collection Procedures

78 faculty members volunteered to administer MCC's 4C's assessment in a total of 244 sections at Southern and Dobson, Red Mountain, Online, Downtown and Offsite during AY 2021-2022. Faculty administered all assessments in regular class sessions during each semester.

Administration of the assessment occurred during the regular classroom period. Faculty utilized an assignment which had already been created or they created a new assignment that best aligned with one of the MCC's 4Cs. Students were informed that the purpose of the assessment was to measure whether education goals are being achieved in order to improve programs and student learning at MCC.

Faculty administered and scored the assessments using Canvas by the end of each semester. At the end of the semesters, OIE exported an Outcomes Report from Canvas into Excel. The reports contained student names, course name, section number, learning outcome, outcome score, and title of assignment. The exported data was used to match each student's assessment with exact demographic and course data using IRIS.

Student Profile of MCC's 4Cs AY 2021-2022

Table 1

Student Profile of AY 2021-2022 Assessments and College		
	AY 2021-2022 Assessment	Total College (Fall 2021 45th day)
Headcount (Unduplicated)	2,235	16,494
Ethnicity		
American Indian	2.1%	3.1%
Asian & Pacific Islander	5.7%	4.7%
Black/African American	5.8%	5.3%
Hispanic/Latino	30.3%	32.4%
Not Specified	2.1%	2.3%
Multi-racial/ethnic	5.2%	4.7%
White	48.9%	47.5%
Gender		
Female	58.0%	55.2%
Male	41.0%	43.8%
Other/Unknown	1.0%	1.1%
Age Group		
Under 18	4.3%	15.0%
18-19	27.6%	20.8%
20-24	38.9%	31.7%
25-29	12.0%	12.9%
30-39	10.9%	11.5%
40-49	3.9%	4.5%
50-59	2.0%	2.3%
60+	0.4%	1.4%
Primary Time of Attendance		
Day	32.3%	33.0%
Evening	5.9%	9.5%
Non-Traditional	57.3%	56.0%
Weekend	1.0%	1.3%
None/Unknown	3.5%	0.1%
Academic Load		
Full Time	39.8%	25.9%
3/4 Time	16.8%	17.1%
Half-Time	20.8%	22.4%
Less than Half-Time	18.1%	34.6%
No Units	4.5%	-

IV. Overall Summary of Results

Faculty Participation

Table 2 shows both, residential and adjunct faculty participation in MCC's 4C's from the pilot semester in Spring 2015 through AY 2021-2022.

Table 2

Faculty Participation								
	Spring 2015 Pilot	AY 2015- 2016	AY 2016- 2017	AY 2017- 2018	AY 2018- 2019	Fall 2019	AY 2020- 2021	AY 2021- 2022
Number of Residential Faculty Participants	33	71	98	136	120	73	44	44
Residential Faculty*	341	323	303	306	301	295	310	321
4Cs Residential Faculty Participation Rate	9.68%	21.98%	32.34%	44.44%	39.87%	24.7	14.2%	13.7%
Number of Adjunct Faculty Participants	2	31	40	97	92	49	46	34
Adjunct Faculty	861	812	598	673	686	833	680	712
4Cs Adjunct Faculty Participation Rate	0.23%	3.81%	6.69%	14.41%	13.41%	5.9	6.8%	4.8%

*Source: MCC HR, Spring 2015 - Fall 2019 actively filled faculty positions (Residential and OYO). Source: MCC Faculty Staffing Dashboard, AY 2001-2021 – AY 2021-2022.

Due to the Covid-19 pandemic Fall 2019 was the only semester reported for AY 2019-2020.

Department Participation

2,235 students were assessed for AY 2021-2022, a 34.6% decrease from AY2020-21. The number of departments that assessed decreased by 1. The number of courses decreased 6.3% in AY 2020-2021. There was an 21.0% decrease in the number of sections that participated from AY 2020-2021 to AY 2021-2022.

Table 3

Department Participation								
	Spring 2015 Pilot	AY 2015- 2016	AY 2016- 2017	AY 2017- 2018	AY 2018- 19	Fall 2019	AY 2020- 2021	AY 2021- 2022
Number of Students Assessed	871	3,061	4,576	7,197	7,058	3,082	3,416	2,235
Number of Departments	12	17	17	19	19	19	18	17
Number of Courses	33	88	134	214	208	97	79	74
Number of Sections	64	235	324	613	639	219	309	244

Analysis Highlights

- 2,235 students were assessed, completing 3,025 assessments in 74 courses by 17 departments
- 44 residential and 34 adjunct faculty administered the assessments in 274 sections
- 261 students were assessed in Civic Engagement
- 1,393 students were assessed in Communication
- 803 students were assessed in Critical Thinking
- 343 students were assessed in Cultural and Global Engagement

V. Results and Observations

Overall Results

Students may have been given an MCC's 4Cs assessment in more than one course, therefore, the # of students in each table in this section of the report are a duplicate count of students. Table 4 provides the departments, the number of instructors, number of courses, number of sections and the number of students assessed AY 2021-2022. Instructors may have taught for 1 or more departments; therefore, the # of instructors are duplicated in Table 4.

Table 4

AY 2021-2022- Assessments Administered by Department				
Department	# Of Instructors	# Of Courses	# Of Sections	# Of Students
Allied Health	1	2	2	17
Applied Sciences and Technology	4	5	7	76
Art	3	3	5	87
Business	4	7	23	287
Communication, Theatre & Film Arts	11	9	36	305
Computer Information Systems	15	4	54	486
Cultural Science	2	3	10	123
Education Studies	8	7	19	153
English/ Humanities/ Journalism	5	13	25	238
Exercise Science, Physical Education, Recreation, Dance	2	3	5	50
Life Science	4	3	7	96
Music	1	4	5	50
Nursing	13	2	11	131
Psychological Science	1	1	2	24
Reading	3	3	15	126
Social Science	1	1	3	40
World Languages	4	4	15	110
Total	82	74	244	2,399

Table 5 shows the department, number of courses assessed, number of courses offered (excluding noncredit, cancelled courses, ROTC and NSO) and the percentage of courses assessed in AY 2021-2022.

Table 5

AY 2021-2022 – Courses Offered and Assessed						
Department	# of Courses Assessed	# of Courses Offered	% of Courses Assessed	# of Sections Assessed	# of Sections Offered	% of Sections Assessed
Allied Health	2	48	4.2%	2	121	1.7%
Applied Sciences and Technology	5	227	2.2%	7	817	0.9%
Art	3	61	4.9%	5	279	1.8%
Business	7	117	6.0%	23	403	5.7%
Communication, Theatre & Film Arts	9	41	22.0%	36	282	12.8%
Computer Information Systems	4	104	3.8%	54	387	14.0%
Cultural Science	3	75	4.0%	10	272	3.7%
Education Studies	7	36	19.4%	19	124	15.3%
English/ Humanities/ Journalism	13	67	19.4%	25	480	5.2%
Exercise Science, Physical Education, Recreation, Dance	3	104	2.9%	5	267	1.9%
Life Science	3	17	17.6%	7	425	1.6%
Music	4	240	1.7%	5	556	0.9%
Nursing	2	20	10.0%	11	150	7.3%
Psychological Science	1	20	5.0%	2	195	1.0%
Reading	3	8	37.5%	15	104	14.4%
Social Science	1	32	3.1%	3	150	2.0%
World Languages	4	42	9.5%	15	187	8.0%
Total	74	1,318	5.6%	244	5,757	4.2%

Note: The table does not include departments that did not assess during AY 2021-2022

Table 6 shows the number of sections that administered at least one of the MCC's 4C's by location from Spring 2015 through AY 2021-2022. MCC's 4C's were administered in a total of 101 sections at Southern and Dobson. Internet administered the assessment in a total of 130 sections in AY 2021-2022.

Table 6

Section Participation by Location								
	Spring 2015 Pilot	AY2015-16	AY2016-17	AY2017-18	AY2018-19	Fall 2019	AY2020-21	AY2021-22
Location	# of Sections	# of Sections	# of Sections	# of Sections	# of Sections	# of Sections	# of Sections	# of Sections
Southern and Dobson	43	149	224	439	427	151	106	101
Red Mountain	7	12	26	40	46	13	1	12
Internet	14	73	73	117	156	54	201	130
Downtown & Offsite	-	1	-	17	-	1	4	1
HS Dual	-	-	1	-	10	-	-	-
Total	64	235	324	613	639	219	312	244

The table below shows the number of sections that administered at least one of the MCC's 4C's from Spring 2015 through AY 2021-2022 by instructional mode.

Table 7

Section Participation by Instructional Mode								
	Spring 2015 Pilot	AY2015-16	AY2016-17	AY2017-18	AY2018-19	Fall 2019	AY2020-21	AY2021-22
Instructional Mode	# of Sections	# of Sections	# of Sections	# of Sections	# of Sections	# of Sections	# of Sections	# of Sections
Field Based	-	1	1	6	5	-	2	5
Hybrid	7	21	32	56	68	25	8	48
Internet	14	73	73	117	156	54	201	130
Live Online	-	-	-	-	-	-	95	22
In Person	43	139	218	432	405	140	6	39
Independent Study	-	1	-	2	5	-	-	-
Total	64	235	324	613	639	219	312	244

Table 8 shows the college – wide average of MCC’s 4Cs for all locations.

The data in Table 8 shows the number of students, number of assessments, and the college-wide average for MCC’s 4C’s. The number of students is duplicated are duplicated.

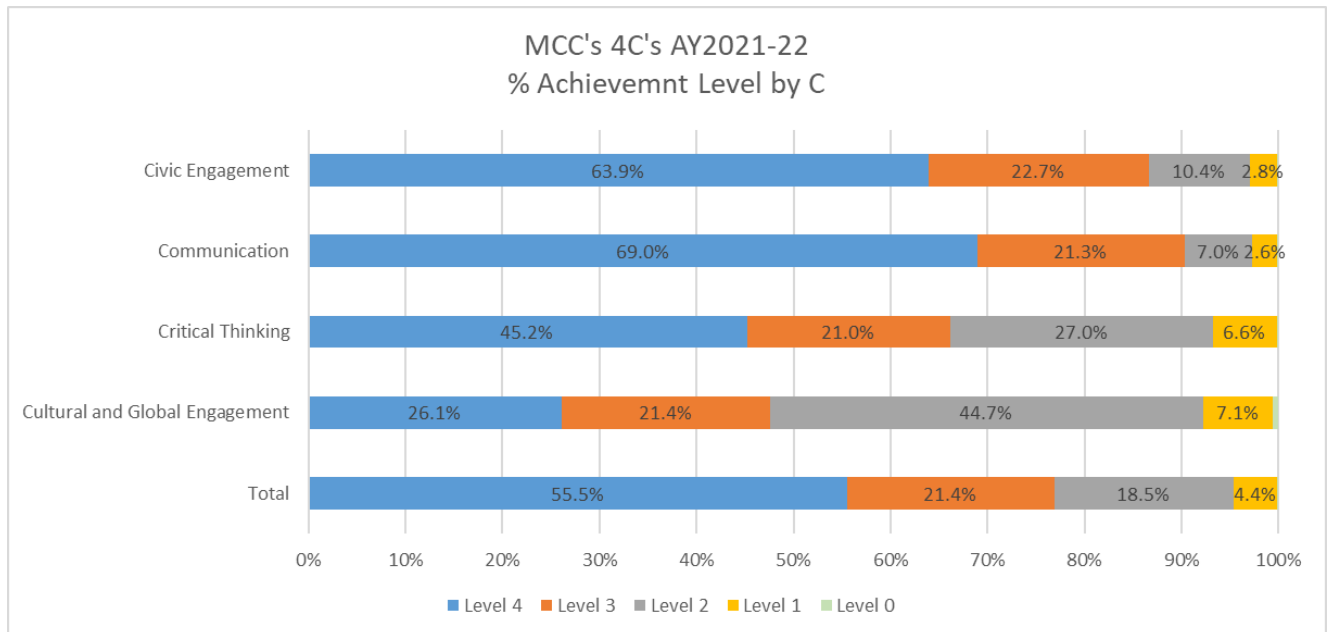
Table 8

AY 2021-2022 - Assessment – All Locations			
Learning Outcome	# of Students	# of Assessments	Average Score
Civic Engagement	442	449	3.47
Communication	1,687	375	3.57
Critical Thinking	946	1,856	3.05
Cultural and Global Engagement	351	1,042	2.66
Total	3,426	3,772	-

Note: The average is on a scale from zero to four with four being the highest level of achievement

Chart 1 shows the percentage of assessment scores for each Level by MCC’s 4C.

Chart 1



- 63.9% of Civic Engagement assessments were rated at Level 4
- 69.0% of Communication assessments were rated at Level 4
- 45.2% of Critical Thinking assessments were rated at Level 4
- 26.1% of Cultural and Global Engagement assessments were rated at Level 4
- Total of 55.5% of all MCC’s 4C’s assessments were rated level 4

Civic Engagement

Definition

Civic Engagement: Civic engagement encompasses actions to promote the quality of life in a community, through both political and non-political processes.

Descriptors

1. INCLUSIVENESS: Demonstrate an ability to engage respectfully with others in a diverse society
2. APPLY KNOWLEDGE: Apply knowledge from one's own study and experiences to active and ethical participation in civic life
3. DEMONSTRATION OF CIVIC IDENTITY AND COMMITMENT: Provide evidence of experience in and reflection on civic engagement activities
4. CIVIC COMMUNICATION: Communicate and listen to others in order to establish personal and professional relationships to further civic action
5. ENGAGEMENT IN CIVIC ACTION AND REFLECTION: Demonstrate the ability to deliberate and collaborate on issues and problems to achieve a civic aim

Civic Engagement Results

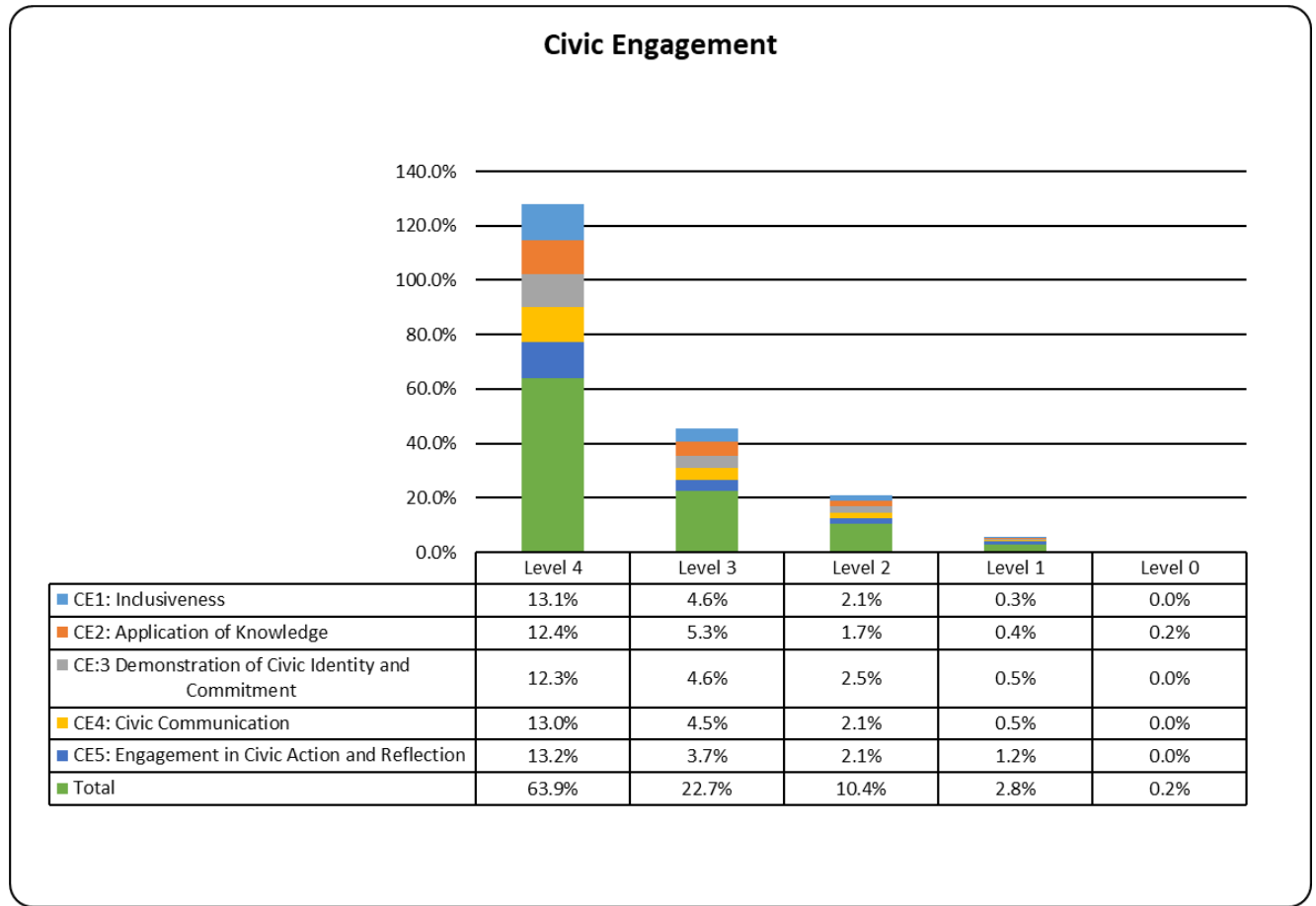
Table 9 shows the college-wide Civic Engagement learning outcome score for AY 2021-2022. In calculating the average score, blanks were given a score of zero. Therefore, the average score is on a scale of 0 to 4, with four being the highest level of achievement.

Table 9

AY 2021-2022 - Assessment – All Locations			
Learning Outcome	# of Students	# of Assessments	Average Score
Civic Engagement	442	449	3.47

Chart 2 shows the percentage of students scoring at each Level per descriptor.

Chart 2



- 86.6% of Civic Engagement assessments were rated at Level 4 or Level 3
- CE5: Engagement in Civic Action and Reflection, assessed more students at Level 4 (13.2%) than the other descriptors assessing at any other Level
- All descriptors assessed most student assessments at a Level 4

Communication

Definition

Communication: The purposeful development, expression and reception of a message through oral, written or nonverbal means. See Appendix A for Scoring Guidelines.

Descriptors

1. PURPOSE: Establish a clear central focus for a message which demonstrates an understanding of context, audience, and task
2. CONTENT: Develop appropriate, relevant content logically sequencing ideas and/or information
3. LANGUAGE: Apply language and/or modes of expression of a discipline in an appropriate and accurate manner to demonstrate comprehension
4. EXECUTION: Convey a message effectively

Communication Results

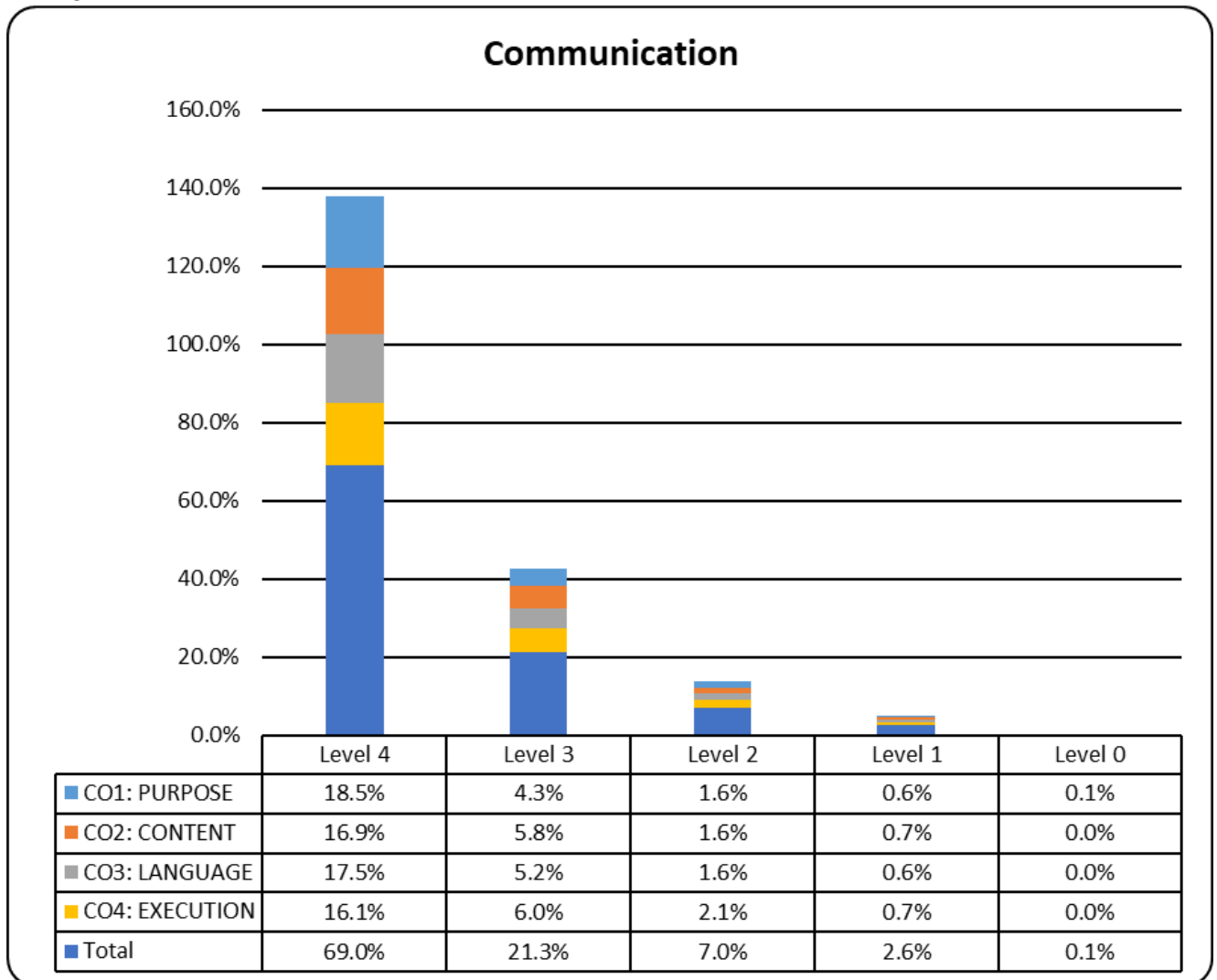
Table 10 shows the college-wide Communication learning outcome score for AY 2021-2022. In calculating the average score, blanks were given a score of zero. Therefore, the average score is on a scale of 0 to 4, with four being the highest level of achievement.

Table 10

AY 2021-2022 - Assessment – All Locations			
Learning Outcome	# of Students	# of Assessments	Average Score
Communication	1,687	375	3.57

Chart 3 shows the percentage of students scoring at each Level per descriptor.

Chart 3



- 69.0% of Communication assessments were rated at Level 4
- CO1: Purpose, assessed more students at Level 4 (18.5%) than the other descriptors assessing at any other Level
- All descriptors assessed most student assessments at a Level 4

Critical Thinking

Definition

Critical Thinking: Habit of mind of analyzing issues, ideas, artifacts, events, and/or evidence to draw conclusions or solve problems.

Descriptors

1. Identify the topic/ subject of inquiry
2. Select appropriate resources required to draw conclusion(s) or solve the problem
3. Apply resources to draw conclusion(s) or solve the problem
4. Evaluate conclusion(s) or the solution to the problem

Critical Thinking Results

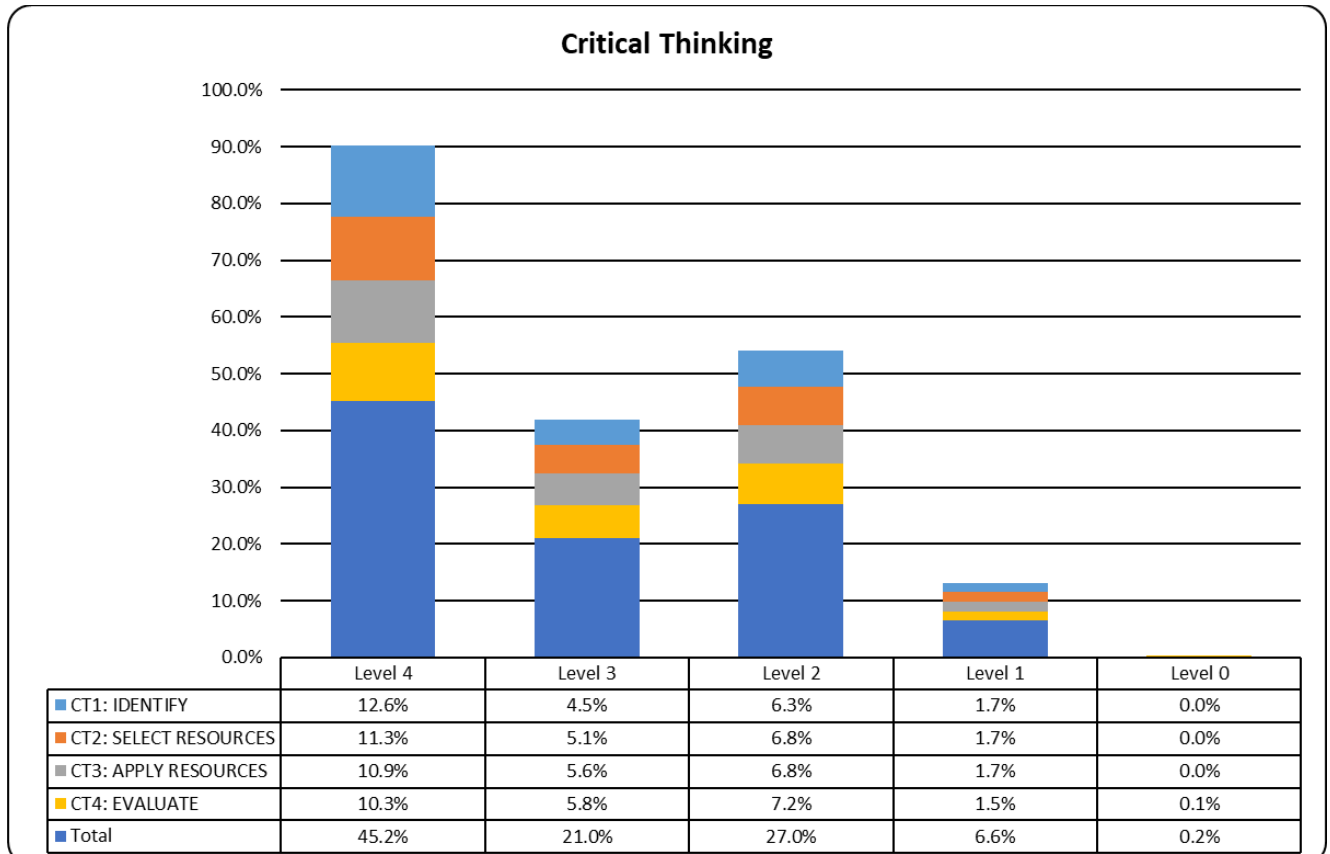
Table 11 shows the college-wide Critical Thinking learning outcome score for AY 2021-2022. In calculating the average score, blanks were given a score of zero. Therefore, the average score is on a scale of 0 to 4, with four being the highest level of achievement.

Table 11

AY 2021-2022 - Assessment – All Locations			
Learning Outcome	# of Students	# of Assessments	Average Score
Critical Thinking	946	1,856	3.05

Chart 4 shows percentage of students scoring at each Level per descriptor.

Chart 4



- 45.2% of Critical Thinking assessments were rated at Level 4
- CT1: Identify, assessed more students at Level 4 (12.6%) than the other descriptors assessing at any other Level
- All descriptors assessed most student assessments at a Level 4

Cultural and Global Engagement

Definition

Cultural and Global Engagement: Global Learning encompasses knowledge, skills, and attitudes students acquire through a variety of experiences that enable them to understand world cultures, analyze global systems, appreciate cultural differences, and apply this knowledge and appreciation to their lives as educated individuals and global citizens.

Descriptors

1. KNOWLEDGE: Analyzes cultural systems, events, or creations and their relationship to worldviews, values, or behavior.
2. INFLUENCES: Evaluates the impact of contemporary and past events, perspectives, or cultures on intercultural relationships.
3. SELF AWARENESS: Analyzes the impact of culture and intercultural experiences on one's worldview, values and behavior, including assumptions, biases, prejudices, or stereotypes.
4. RESPONSIBILITY: Evaluates the impact of one's moral and ethical reasoning on one's actions in relation to culturally different groups.
5. CULTURAL EXPRESSION: Generates ideas, creations, or models that express the human condition and one's relationship with the world

Cultural and Global Engagement Results

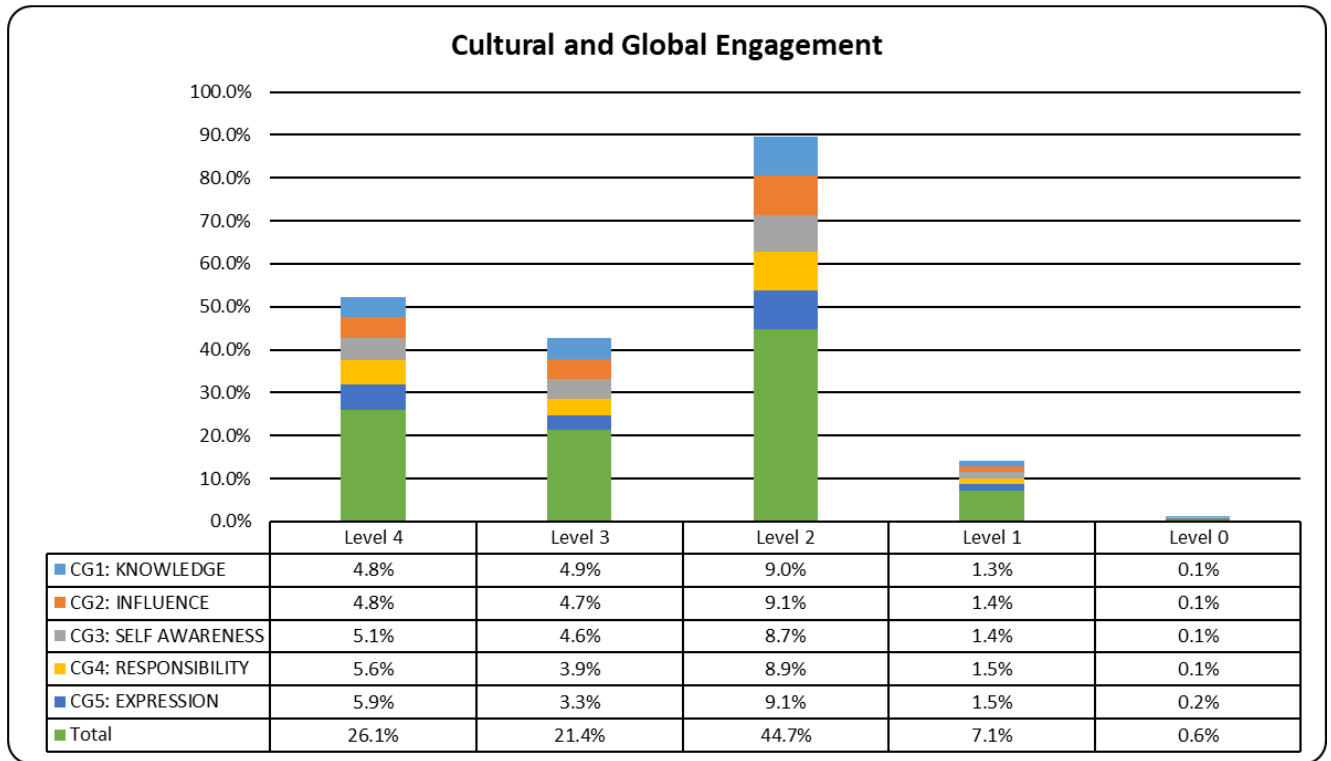
Table 12 shows the college-wide Cultural and Global Engagement learning outcome score for AY 2021-2022. In calculating the average score, blanks were given a score of zero. Therefore, the average score is on a scale of 0 to 4, with four being the highest level of achievement.

Table 12

AY 2021-2022 - Assessment – All Locations			
Learning Outcome	# of Students	# of Assessments	Average Score
Cultural and Global Engagement	351	1,042	2.66

Chart 5 shows the percentage of students scoring at each Level per descriptor.

Chart 5



- 44.7% of Cultural and Global Engagement assessments were rated at Level 2
- CG2: Influence and CG5: Expression, assessed more students at Level 3 (9.1%) than the other descriptors assessing at any other Level
- All descriptors assessed most student assessments at a Level 2

VI. Indirect Measures of Student Learning

In addition to the direct measures of the achievement of student learning provided by evaluating the results of the assessments administered to students annually, several indirect measures of student learning are collected at the college. These indirect measures provide further evidence of student learning; results from several indirect measures are presented in this section.

Course Completion

Data about course completion is provided for Fall semesters in Table 17. The percentages of successful/unsuccessful students completing a course and those withdrawing from a course have remained relatively stable.

Table 13

Mesa Community College - Course Completion				
	Successful (A, B, C, P)	Unsuccessful (D, F, Z)	Completer Sub-total	Withdrew (W,Y)
Fall 2009	70%	9%	79%	21%
Fall 2010	69%	9%	78%	22%
Fall 2011	69%	10%	79%	21%
Fall 2012	70%	10%	80%	20%
Fall 2013	72%	10%	82%	18%
Fall 2014	73%	10%	83%	17%
Fall 2015	74%	10%	84%	16%
Fall 2016	74%	10%	84%	16%
Fall 2017	76%	9%	85%	15%
Fall 2018	76%	9%	85%	15%
Fall 2019	74.5%	9.1%	84%	16.5%
Fall 2020	72%	9%	81%	19%
Fall 2021	72%	9%	81%	19%

Term to Term Retention

Term to term retention (sometimes called persistence) is a measure of how many credit students return to college in the future semesters. Students who graduated/earned an award prior to returning the following semester are excluded from the original cohort and following terms. Below is the Fall 2021 to Spring 2022 retention rate.

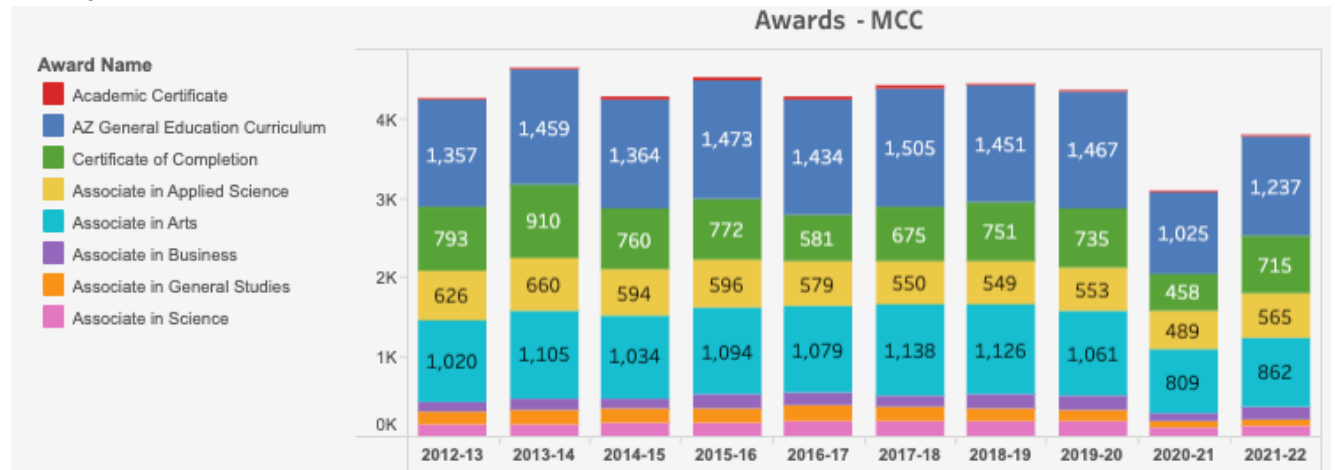
Table 14

	Fall Cohort 2021	Fall to Spring Retention	Fall to Spring Retention Rate
All Students	14,941	8,696	60.3%
Grand Total	14,941	8,696	60.3%

Degree and Certificate Awards

MCC conferred 1,815 degrees and 1,973 certificates in 2021-22.

Chart 6



Source: MCCC Office of Institutional Effectiveness – Maricopa Trends

Table 15

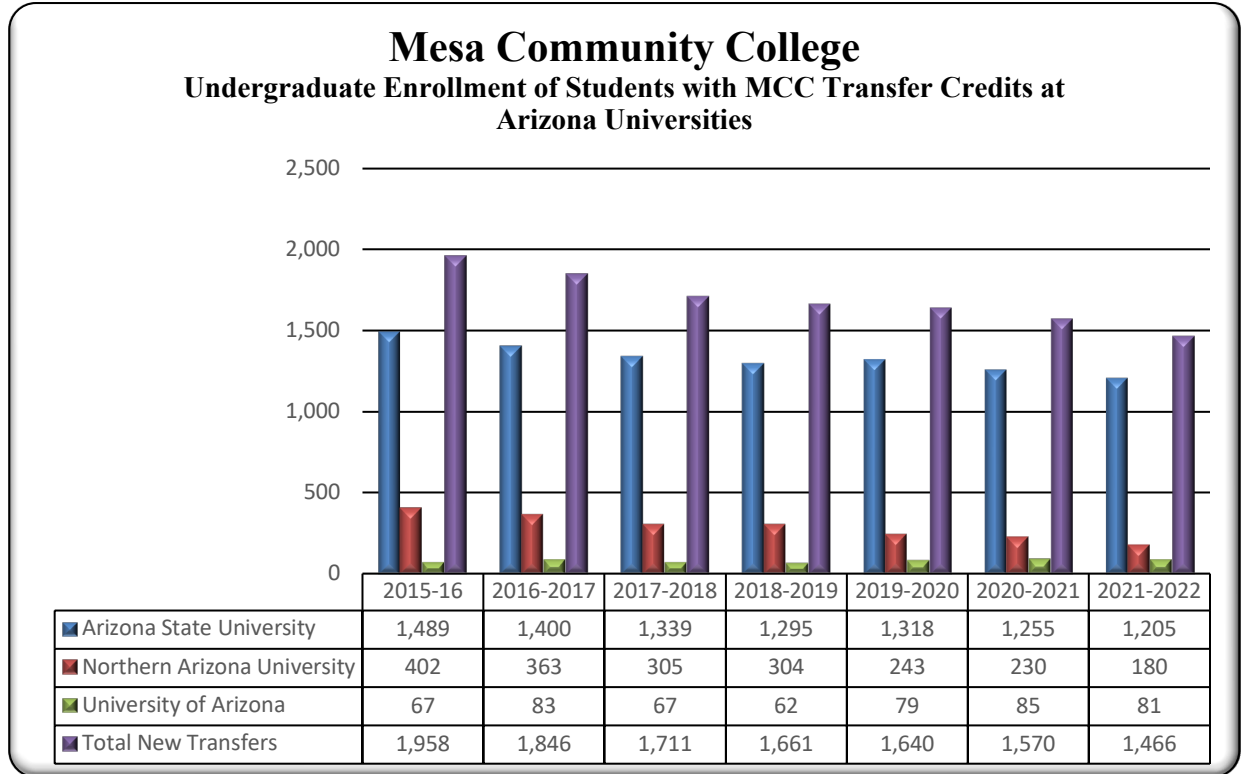
	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	
Certificate	Academic Certificate (AC)	0.2%	0.5%	0.9%	0.9%	0.8%	0.9%	0.5%	0.6%	0.6%	
	AZ General Ed. Curriculum (AGEC)	31.9%	31.4%	31.9%	32.7%	33.6%	34.0%	32.7%	33.6%	32.7%	
	Certificate of Completion (CCL)	18.6%	19.6%	17.8%	17.1%	13.6%	15.2%	16.9%	16.9%	14.9%	18.9%
Degrees	Associate in Business (AB)	2.8%	3.2%	2.7%	3.7%	3.7%	3.2%	3.7%	4.2%	3.3%	4.5%
	Associate in Applied Science (AAS)	14.7%	14.2%	13.9%	13.2%	13.6%	12.4%	12.4%	12.7%	15.9%	14.9%
	Associate in Arts (AA)	24.0%	23.8%	24.2%	24.3%	25.3%	25.7%	25.4%	24.3%	26.2%	22.8%
	Associate in General Studies (AGS)	3.7%	4.0%	4.5%	4.0%	4.9%	3.9%	4.0%	3.1%	2.4%	2.1%
	Associate in Science (AS)	4.0%	3.3%	4.2%	4.1%	4.5%	4.6%	4.4%	4.5%	3.9%	3.7%

Source: MCCC Office of Institutional Effectiveness – Maricopa Trends

Transfer

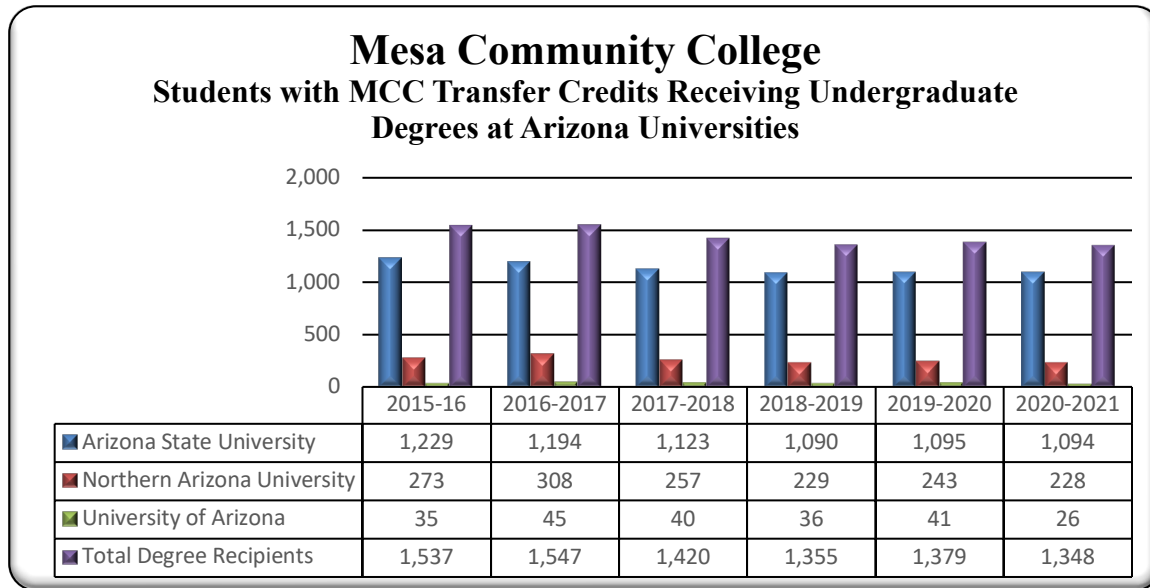
The number of students with 12 or more MCC transfer credits enrolled in an Arizona university as new transfers in Fall and Spring semesters and the number of degree recipients with MCC transfer credits are described in the following charts.

Chart 7



Source: Assist Data Warehouse

Chart 8



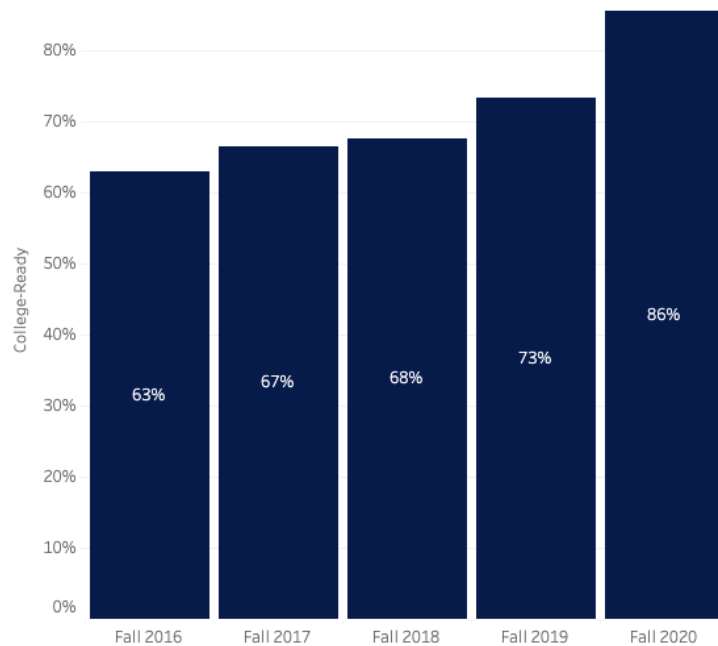
Source: Assist Data Warehouse

College-Level Course Completion in the First Year

The college-ready rates, completion of math and English in the first year, success rate in the first year trends are shown in the charts below.

Chart 9

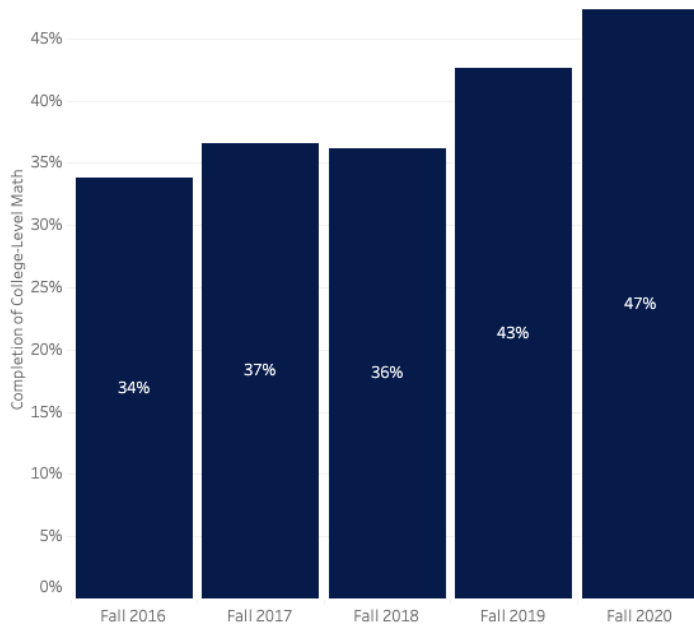
College-Ready Trend



Source: 2021 Governing Board Monitoring Metrics Performance Dashboard

Chart 10

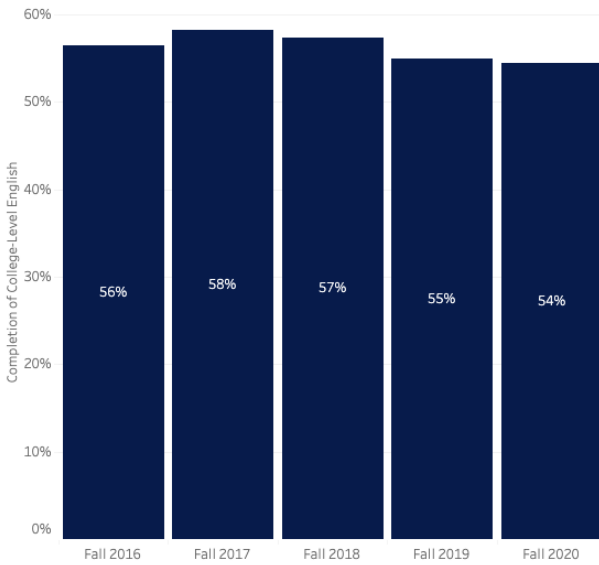
Completion of College-Level Math Trend



Source: 2021 Governing Board Monitoring Metrics Performance Dashboard

Chart 11

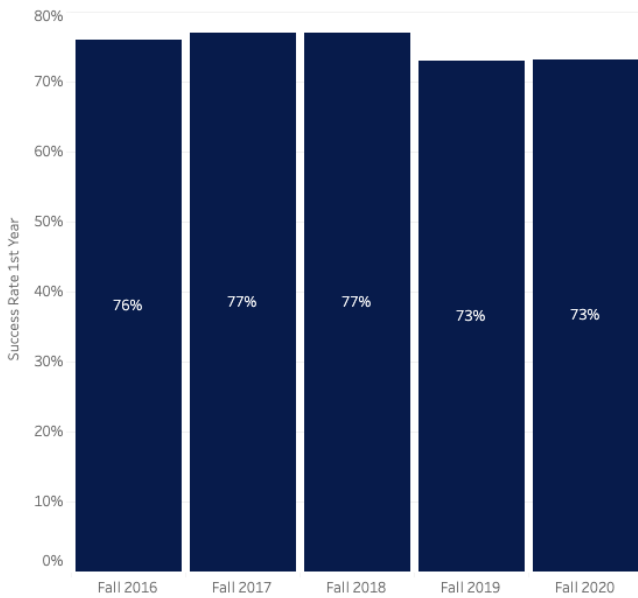
Completion of College-Level English Trend



Source: 2021 Governing Board Monitoring Metrics Performance Dashboard

Chart 12

Success Rate 1st Year Trend



Source: 2021 Governing Board Monitoring Metrics Performance Dashboard

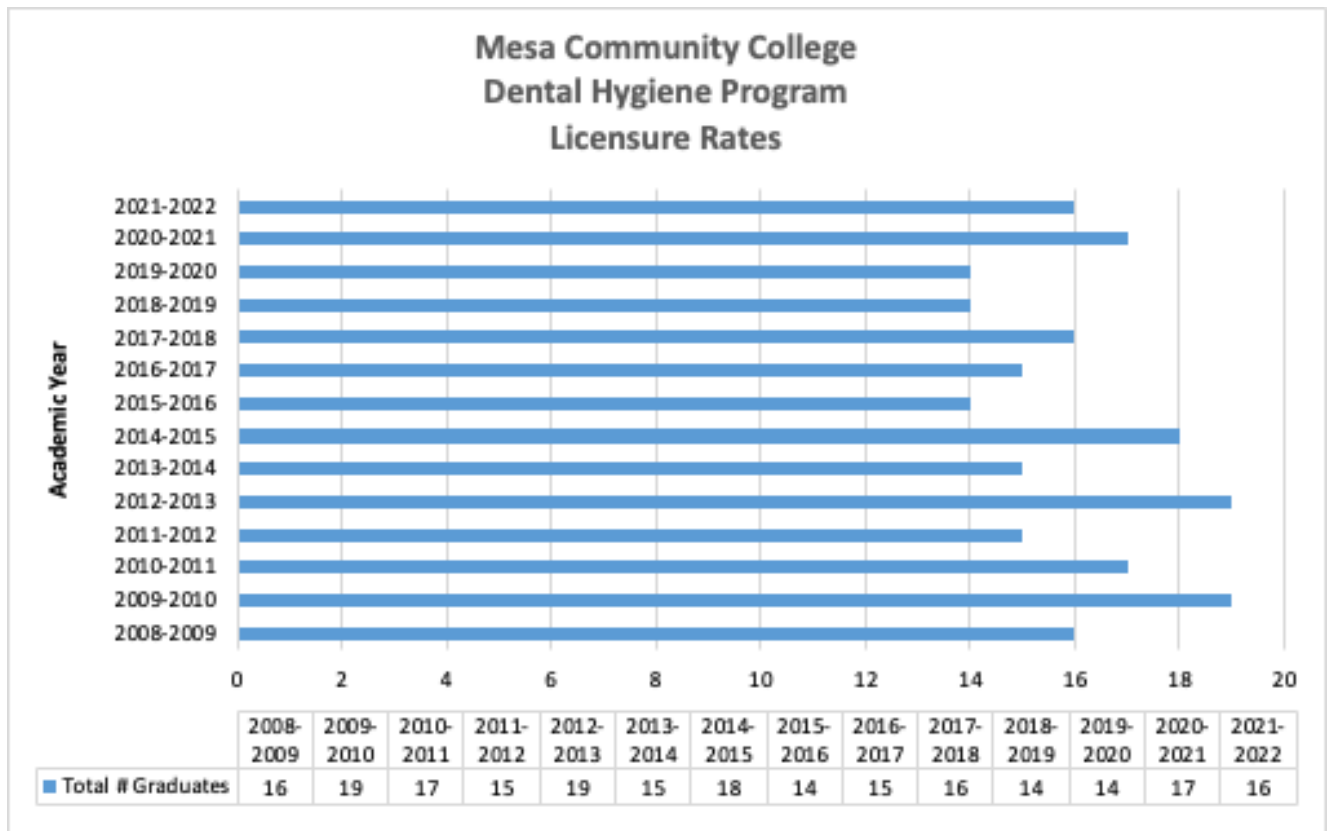
Licensure and Certification

Students in Dental Hygiene, Fire Science, Mortuary Science, Network Academy, Nursing, and Veterinary Technology programs are able to receive licensure from outside licensure bodies after their studies at MCC. Data on licensure is presented below for these programs.

Dental Hygiene

Dental hygiene students take a national written exam, a regional practical and written exam, and a state written jurisprudence exam. Students must pass all exams in order to obtain a license to practice. Results are obtained from the national and regional examining bodies.

Chart 13



Fire Science and EMT

The MCC Fire Science program offers certification in several areas as detailed in Tables 21-22 (last updated 2018). The Fire Fighter I and II Certification and the Hazardous Materials First Responder are both granted by the Arizona State Fire Marshall's Office. The actual success rate of attainment of the certificates may be underestimated because only the initial attempt at passage is reported back to the college. Students have three chances to pass the certification.

Table 21

Fire Science and EMT Licensing Agencies	
License/Certification	Agency
Candidate Physical Agility Test (FSC 130)	International Association of Firefighters
	International Fire Chiefs Association
Hazardous Materials/First Responder (FSC 105)	Arizona Center for Fire Service Excellence
Fire Operations (FSC 102)	Arizona Center for Fire Service Excellence
Wildland Firefighter (FSC 110)	Arizona Bureau of Land Management
Paramedic (EMT 272)	Arizona State Department of Health Services and National Registry of EMTs
EMT (EMT 104)	Arizona State Department of Health Services and National Registry of EMTs
Fire Investigation	Arizona International Association of Arson Investigators
Cardiopulmonary Resuscitation (EMT 101)	American Heart Association

Table 22

Mesa Community College - Fire Science/EMT Passage Rates									
License/Certification	Spring/Summer 2016			Spring/Summer 2017			Spring/Summer 2018		
	Attempt	Passed	%	Attempt	Passed	%	Attempt	Passed	%
Wildland Firefighter (FSC 110)	0	0	0	21	21	100%	47	47	100%
Fire Department Operations (FSC 102)	20	17	85%	19	19	100%	41	41	100%
Hazardous Materials/First Responder (FSC105)	43	36	84%	38	30	79%	137	137	100%
Candidate Physical Ability Test (FSC 130)	25	17	68%	30	18	60%	34	19	56%
Cardiopulmonary Resuscitation (EMT 101)	223	223	100%	349	349	100%	192	192	100%
EMT (EMT 104: 3 attempts are allowed)	145	125	86%	125	108	86%	138	130	94%
Paramedic (EMT 272: 3 attempts are allowed)	23	23	100%	20	18	90%	20	17	85%

Network Academy

The Network Academy offers certification pathways in Network Administration, Network Security, Microsoft, Red Hat Linux, VMware, Information Assurance, and Workplace Skills. Training formats include fast tracks, traditional semesters, distance learning, and internet deliveries. Network Academy students earn industry certification after completion of the program; however, there is not a formal mechanism for reporting certifications back to the program.

Nursing

Nursing students who complete a four semester curriculum and receive the Associate of Applied Science degree are eligible to take an exam to become licensed through the National Council of State Boards of Nursing Examination for Nursing (NCLEX RN) licensure exam; pass rates are detailed in Table 23 below.

Table 23

Mesa Community College Nursing Program NCLEX RN Examination			
	Total # Graduates	# Graduates Taking NCLEX RN Exam	Pass Rate of Exam Takers
Spring 2014	67	66	100%
Spring 2015	84	83	95%
Spring 2016	83	78	96%
Spring 2017	83	73	95%
Spring 2018	54	52	96%
Spring 2019	78	77	99%
Spring 2020	81	80	99%
Spring 2021	74	68	92%
Spring 2022	62	60	97%

Veterinary Technology

Graduates of the MCC Veterinary Technology Program are required to complete two semesters of prerequisite coursework in order to qualify to formally apply for admission to the Program proper. After a selective admission process, the Program proper consists of a five-semester curriculum leading to the Associate of Applied Science in Veterinary Technology/Animal Health. Graduates are immediately eligible to “sit” for the Veterinary Technician National Examination (VTNE) and the Arizona state Veterinary Technician certification examination. The VTNE is administered by the Professional Examination Service, and the state certification examination is administered by the Arizona State Veterinary Medical Examining Board. Upon passing both the VTNE and the state certification examination, the successful candidate is granted certification as a Certified Veterinary Technician by the state of Arizona.

Table 24

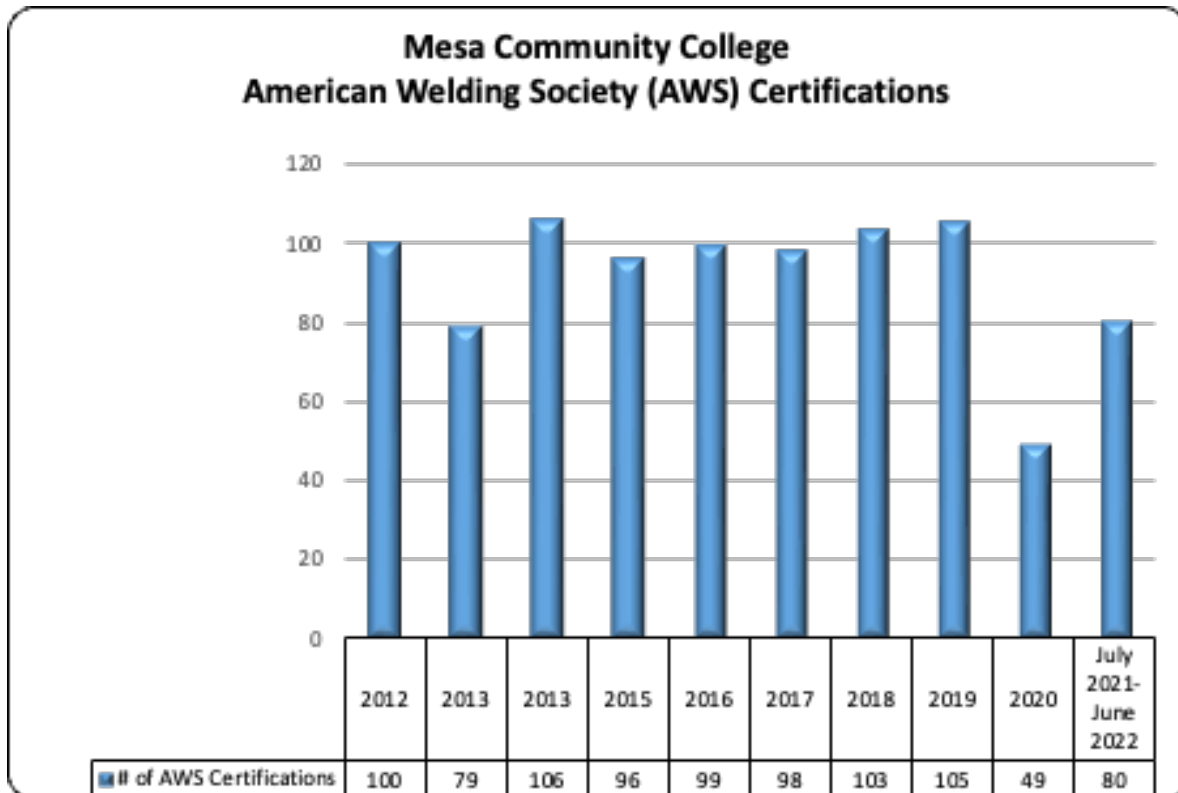
Mesa Community College Veterinary Technology Board Exam Pass Rates			
	Graduates	% Passed State Exam	% Passed National Exam
Spring 2014	13	85%	85%
Spring 2015	15	93%	93%
Spring 2016	10	100%	100%
Spring 2017	10 (6 sat for boards)	100%	100%
Spring 2018	11	N/A	100%
Spring 2019	18	N/A	71%
Spring 2020	10	N/A	100%
Spring 2021	15	N/A	89.9%
Spring 2022	9	N/A	(Not yet reported at the time of this report)

Welding

Welding students who are on the path to gain a Certificate of Completion (CCL) in Welding develop skills in oxyacetylene (gas) and electric (arc) welding. The CCL in Welding has an emphasis on preparing students for the American Welding Society Arc certification exam.

The number of MCC students receiving the AWS Welding Certifications since 2012 are shown in Chart 14.

Chart 14



Industry welding certifications students received include:

- SMAW Plate
- FCAW Plate
- GMAW Plate
- GTAW Aluminum Sheet
- GTAW Stainless Steel Sheet
- GTAW Carbon Steel Sheet and
- GTAW/SMAW Pipe Certifications

Appendix A
MCC's 4Cs Scoring Guidelines

Scoring Guidelines

Civic Engagement Scoring Guidelines

CIVIC ENGAGEMENT - SCORING GUIDELINES					
DEFINITION: Civic engagement encompasses actions to promote the quality of life in a community, through both political and non-political processes.					
Descriptors	Level 4	Level 3	Level 2	Level 1	Level 0
	Proficient: Demonstrates in-depth understanding of the process or concept. Minor errors or mistakes may be present but do not impede understanding.	Developing Proficiency: Demonstrates foundational understanding of the process or concept, but misconceptions impede in-depth understanding.	Beginning Proficiency: Demonstrates beginning understanding of the process or concept.	Not Proficient: Does not demonstrate understanding.	No submission
1. INCLUSIVENESS: Demonstrate an ability to engage respectfully with others in a diverse society					
2. APPLY KNOWLEDGE: Apply knowledge from one's own study and experiences to active and ethical participation in civic life					
3. DEMONSTRATION OF CIVIC IDENTITY AND COMMITMENT: Provide evidence of experience in and reflection on civic engagement activities					
4. CIVIC COMMUNICATION: Communicate and listen to others in order to establish personal and professional relationships to further civic action					
5. ENGAGEMENT IN CIVIC ACTION AND REFLECTION: Demonstrate the ability to deliberate and collaborate on issues and problems to achieve a civic aim					

Communication Scoring Guidelines

COMMUNICATION - SCORING GUIDELINE					
DEFINITION: The purposeful development, expression and reception of a message through oral, written or nonverbal means.					
Descriptors	Level 4	Level 3	Level 2	Level 1	Level 0
	<p>Proficient: Demonstrates in-depth understanding of the process or concept. Minor errors or mistakes may be present but do not impede understanding.</p>	<p>Developing Proficiency: Demonstrates foundational understanding of the process or concept, but misconceptions impede in- depth understanding.</p>	<p>Beginning Proficiency: Demonstrates beginning understanding of the process or concept.</p>	<p>Not Proficient: Does not demonstrate understanding.</p>	<p>No submission</p>
<p>1. PURPOSE: Establish a clear central focus for a message which demonstrates an understanding of context, audience, and task</p>					
<p>2. CONTENT: Develop appropriate, relevant content logically sequencing ideas and/or information</p>					
<p>3. LANGUAGE: Apply language and/or modes of expression of a discipline in an appropriate and accurate manner to demonstrate comprehension</p>					
<p>4. EXECUTION: Convey a message effectively</p>					

Critical Thinking Scoring Guidelines

CRITICAL THINKING - SCORING GUIDELINES					
DEFINITION: Habit of mind of analyzing issues, ideas, artifacts, events, and/or evidence to draw conclusions or solve problems.					
Descriptors	Level 4	Level 3	Level 2	Level 1	Level 0
	<p>Proficient: Demonstrates in-depth understanding of the process or concept. Minor errors or mistakes may be present but do not impede understanding.</p>	<p>Developing Proficiency: Demonstrates foundational understanding of the process or concept, but misconceptions impede in-depth understanding.</p>	<p>Beginning Proficiency: Demonstrates beginning understanding of the process or concept.</p>	<p>Not Proficient: Does not demonstrate understanding.</p>	No submission
1. Identify the topic/ subject of inquiry					
2. Select appropriate resources required to draw conclusion(s) or solve the problem					
3. Apply resources to draw conclusion(s) or solve the problem					
4. Evaluate conclusion(s) or the solution to the problem					

Cultural and Global Engagement Scoring Guidelines

CULTURAL AND GLOBAL ENGAGEMENT - SCORING GUIDELINE					
DEFINITION: Global Learning encompasses knowledge, skills, and attitudes students acquire through a variety of experiences that enable them to understand world cultures, analyze global systems, appreciate cultural differences, and apply this knowledge and appreciation to their lives as educated individuals and global citizens.					
Descriptors	Level 4	Level 3	Level 2	Level 1	Level 0
	Proficient: Demonstrates in-depth understanding of the process or concept. Minor errors or mistakes may be present but do not impede understanding.	Developing Proficiency: Demonstrates foundational understanding of the process or concept, but misconceptions impede in- depth understanding.	Beginning Proficiency: Demonstrates beginning understanding of the process or concept.	Not Proficient: Does not demonstrate understanding.	No submission
1. KNOWLEDGE: Analyzes cultural systems, events, or creations and their relationship to worldviews, values, or behavior.					
2. INFLUENCE: Evaluates the impact of contemporary and past events, perspectives, or cultures on intercultural relationships.					
3. SELF AWARENESS: Analyzes the impact of culture and intercultural experiences on one’s worldview, values and behavior, including assumptions, biases, prejudices, or stereotypes.					
4. RESPONSIBILITY: Evaluates the impact of one’s moral and ethical reasoning on one’s actions in relation to culturally different groups.					
5. EXPRESSION: Generates ideas, creations, or models that express the human condition and one’s relationship with the world					