Report of General Education Assessment

2018-2021

December 2021

Report on General Education Assessment

Chattahoochee Valley Community College (CVCC) measures the effectiveness of its general education program using multiple direct and indirect assessments. The *Report on General Education Assessment* is a composite of three years of data collected from faculty assessments and random sampling of student's artifacts.

Each fall, division chairs begin the process of creating a general education portfolio for CVCC. The process is as follows:

1. Annually, the five-general education/associate degree outcomes (Writing, Speech, Math, Science, and Technology) are assessed;
2. In the fall, department chairs meet with faculty to ensure there is agreement on the identified student learning outcomes (SLOs) and assessment tools that are in place.
3. The general education faculty members assigned general education SLOs collect the assessment data to the specific course. Additionally, the assessment data is collected from student work in traditional, online, and hybrid courses identified.
4. Annually, the assessment of the data takes place during fall and spring semesters.
5. Annually, the results from the assessment are entered in the College's Unit Plan platform for each area by the department chairs by the end August.
6. Division meetings are held to discuss the results and determine what changes, if any, need to be made.
7. The division chair enters the *Use of Results* in the Unit Plan and develops an action plan for improvement
8. If a change requires funding beyond the normal operating expenses for the department, a Budget Form B will be completed the following spring.

College-Level General Education Student Learning Outcomes

CVCC assesses its General Education Program in the following areas: writing, speech, math, science, and technology. Faculty members teaching general education courses assess the effectiveness of courses in preparing students to master the student learning outcome (SLO).

Student Learning Outcome 1: Writing

Students will write sentences and paragraphs in Standard English that are sequential, logical, and effectively organized. The SLO assesses effective writing skills by evaluating essays for major, minor, and documentation errors in English 101 and English 102.

NOTE: The English curriculum was restructured based on the recommendation of the Alabama Community College System (ACCS) College Readiness Task Force to follow a co-requisite model to increase the number of students entering college-level English. Fall 2018, ACCS eliminated developmental English and Reading courses. Based on the recommendation of the College Readiness Task Force, ENR094 was renamed to ENR098, which integrated writing, and reading into one developmental course and implemented a co-requisite learning support course, ENG099, to support the student's success in English 101. Additionally, the newly developed placement guidelines were implemented (See Appendix for Placement Guidelines).

Assessment Results: The sample of composition ENG 101 and 102 papers indicated that the commission of major errors increased from 25% to 63%, an increase of 38%. The sample also indicated that the commission of minor errors increased from 65% to 86%, an increase of 21%. The sample further indicated that the commission of documentation errors decreased from 21% to 9%, a decrease of 12%.

The English 101 essays, 59% of papers contained major errors, 90% contained minor errors, and 18% contained documentation errors. The English 102 essays, 68% contained major errors, 82% contained minor errors, and 0% contained documentation errors. Student's major and minor errors increased. The English department attributed this increase to the lack of in person workshops and peer tutoring in class. These in class activities were not done due to social distancing guidelines. The decrease in the commission of documentation error is attributed to instructors' providing some of the citation information for students. Table 1 reflects the data collected on the commission of major errors, minor errors, and documentation for the writing for the writing SLO:

Table 1 ENG 101 and ENG 102

Academic Year	Commission of Major Errors	Commission of Minors Errors	Commission of Documentation Errors
2018-19	30%	89%	21%
2019-20	25%	65%	21%
2020-21	63%	86%	9%

Use of Results: The increase of errors is disheartening; however, it is not alarming or surprising. Students benefit from hands on peer reviewing and tutoring in class. These in class activities were largely missing from the 2020-21 academic year due to COVID restrictions.

Action Taken for Improvement: The department is implementing new software (Zoom with YouTube) to improve online lectures and meet ADA requirements for closed captioning. The department is also expanding the online resources for composition students and using additional conferencing platforms and practices to improve student engagement and performance. Additionally, the department will implement EdReady software for the ENG099 class. Students placing in the ENG 099 co-requisite course for ENG 100 will have to complete one hour a week in the tutoring center as part of their coursework.

Student Learning Outcome 2: Speech

Students will demonstrate oral communication competencies using unity of thought and logical arrangement of ideas. This SLO focuses on effective oral communication skills in Public Speaking 107 using an oral speech rubric.

Assessment Results: The speech faculty established a benchmark of 80% mastery in organization, verbal interaction, body language, and use of language. A standardized rubric was used to assed a sample of informative speeches to get a snapshot of overall student achievement. The data collected indicated the following: 95% of students met the benchmark for speech organization, 100% of the students met the benchmark for use of language, 25% of the students met the benchmark for verbal interaction and body language, and 90% of students met the benchmark for the conclusion. Table 2 demonstrates the results of the oral communication SLO:

Table 2: Public Speaking 107

Academic Year	Mastery of Organization	Mastery of Verbal Interaction/ Body Language	Mastery of Use of Language	*Conclusion
2018-19	87%	85%	84%	N/A
2019-20	85%	84%	85%	N/A
2020-21	95%	25%	100%	90%

*Conclusion added to the assessment in 2020-21.

Use of Results: Students met the criteria of proficiency in organization, use of language and conclusion. The benchmark for verbal interaction and body language was not mastered. This indicates students need concentrated interaction and review on verbal and non-verbal communication cues. This could be attributed to students having record their speeches instead of presenting in front of a live audience. The speech faculty will continue to use the standardized speech rubric and further develop assignments and activities that focus on verbal and non-verbal language.

Action Taken for Improvement: Student achievement is not where it should be. In order to address both the deficiency in the verbal and non-verbal communication cues, the speech faculty will provide opportunity for students to make up a missed speech at the end of the semester. Outline submissions will be extended to provide time for revisions after feedback is given. Additional activities such as TED talks reviews will be implemented to focus student's attention to verbal and nonverbal communication cues. Finally, faculty modeling of appropriate verbal and nonverbal cues in class.

Additionally, online and in-person students will be offered optional Zoom sessions as an opportunity to discuss delivery and the speech process as a community. Students will be required to critique a professional public speaker to gain insight into effective delivery techniques. Lastly, a formal peer review assignment will be implemented so students can receive speech delivery feedback from various members of their audience.

Student Learning Outcome 3: Math

Students will perform mathematical computations and apply mathematical principles and methodologies to be successful in their specific degree program. The mathematical skills are assessed in MTH 100 Intermediate College Algebra and MTH 112 Precalculus Algebra.

NOTE: The math curriculum was restructured based on the recommendation of the ACCS College Readiness Task Force to follow a co-requisite model to increase the number of students entering college-level math. Based on the recommendation of the College Readiness Task Force, ACCS eliminated developmental math courses MTH080, MTH090, MTH091 and MTH 092. MTH 098 Elementary Algebra transitioned to a four-credit hour developmental math course. ACCS implemented a co-requisite learning support courses for Math 100 and Math 112 to support student success in these math courses. The math placement guidelines with the co-requisites MTH 099 and MTH 111 were offered beginning in fall 2019 (see Appendix for placement guidelines).

Math 100:
Students will be able to solve quadratic equations. This Student Learning Outcome (SLO) will focus on Q1 - solving quadratic equations with rational roots, Q2 – solving quadratic equations with irrational roots, and Q3 – solving quadratic equations with imaginary roots. Three common SLO questions will be included on the comprehensive final exam. The math department's goal is 75% of the students taking the final exam will answer two out of three questions correctly.

Assessment Results: In MTH 100, fall 2020 had 62.8% and spring 2021 had 55.8% of the students taking the final exam mastered two out of three Student Learning Outcome questions correctly. Below is the percent mastery on each question.

Question 1 – Fall 72.1% and Spring 61.0% and total 66.9%
Question 2 – Fall 58.1% and Spring 54.5% and total 56.4%
Question 3 – Fall 41.9% and Spring 53.2% and total 47.2%
Overall mastery – Fall 62.8% and Spring 55.8% and total 59.5%

Table 3 reflects the percent of mastery for fall, spring and yearly percentages for MTH 100.

Table 3: MTH 100 Mastery

Academic Year	Fall Semester	Spring Semester	Academic Year Totals
2018-19	55%	55%	55%
2019-20	50%	86%	64%
2020-21	63%	56%	60%

Use of Results: The data shows that all students need to improve on solving quadratics. However, question three, quadratic equations with imaginary roots, had the lowest percentage of mastery. This evidence suggests that more time and examples are needed for students to learn the material. This data collected continues to guide our assessment and evaluation procedures.

Action Taken for Improvement: The Math Department will continue to review course objectives to identify material that can be streamlined. Sequence of the course will be revisited to determine if it can be adjusted to allow more time for mastery. This will allow additional class time to be spent on quadratic equations. Math faculty collaborated with ideas on using the Surface Pro to create personalized instructional videos for reinforcement of concepts. They will have review sessions prior to tests. MyMathLab will be used for homework assignments to include videos and other instructional material online. Students will be referred to the tutoring center for additional help with difficult concepts.

Math 112:
Students will be able to apply concepts of exponential and logarithmic functions. This Student Learning Outcome (SLO) will focus on Q1 - solving an exponential equation using the one-to-one property, Q2 – solving an exponential equation using logarithms, Q3 – solving an exponential equation with a base of *e*, Q4 – solving a basic logarithmic equation, and Q5 – solving a logarithmic equation requiring the product property

of logarithms. Five common SLO's questions will be included on the comprehensive final exam. The math department's goal is 75% of the students taking the final exam will answer three out of five questions correctly.

Assessment Results: In MTH 112, Fall 2020 had 62.7% and Spring 2021 had 70.4% of the students taking the final exam mastered three out of five Student Learning Outcome questions correctly. Below is the percent mastery on each question.

Question 1 – Fall 57.6% and Spring 59.3% and total 58.4%
Question 2 – Fall 49.2% and Spring 68.5% and total 58.4%
Question 3 – Fall 50.8% and Spring 66.7% and total 58.4%
Question 4 – Fall 79.7% and Spring 77.8% and total 78.8%
Question 5 – Fall 33.9% and Spring 50.0% and total 41.6%
Overall mastery – Fall 62.7% and Spring 70.4% and total 66.4%

Table 3 reflects the percent of mastery for fall, spring and yearly percentages for MTH 112.

Table 3: MTH 112 Mastery

Academic Year	Fall Semester	Spring Semester	Academic Year Totals
2018-19	47%	67%	57%
2019-20	55%	89%	77%
2020-21	63%	70%	66%

The math curriculum was restructured based on the recommendation of the ACCS College Readiness Task Force to follow a co-requisite model to increase the number of students entering college-level math. ACCS implemented a co-requisite learning support course, MTH111, to support student success in MTH 112. The co-requisite course, MTH111 was offered fall 2019 and had a pass-rate of 75%. (See Appendix for placement guidelines).

Use of Results: The data shows that all students need to improve on solving exponential and logarithmic equations. However, question five, had the lowest percentage of mastery. This question required students to solve a quadratic equation. This SLO is addressed in our MTH 100 course as well. Students struggle with factoring and solving quadratic equations. This evidence suggests that more time and examples are needed for students to learn the material. Question 4 mastery was met each semester with fall 80% and Spring 78%. This data collected continues to guide our assessment and evaluation procedures.

Action Taken for Improvement: The Math Department will continue to review course objectives to identify material that can be streamlined. Sequence of the course will be revisited to determine if it can be adjusted to allow more time for mastery. This will allow additional class time to be spent on exponential and logarithmic equations. Math faculty collaborated with ideas on using the Surface Pro to create personalized instructional videos for reinforcement of concepts. They will have review sessions prior to tests.

MyMathLab will be used for homework assignments to include videos and other instructional material online. Students will be referred to the tutoring center for additional help with difficult concepts. The MTH111 co-requisite will continue to be offered to support students who meet the placement guidelines in both MTH 112 and MTH111.

Student Learning Outcome 4: Technology

Student will demonstrate knowledge of basic computer skills through the use of current computer technology and applications to develop computer literacy for academic setting and lifelong learning. The SLO is assessed in CIS146.

Assessment Results: The CIS faculty established a 75% proficiency of basic computer literacy for the SLO. This SLO assessed by given a certification exam that encompassed Microsoft Word, Excel, and PowerPoint. The average success rate for obtaining the TestOut Office Pro certification was 75.9% for fall 2020 and 76.5% for spring 2021 academic year. The overall scores the fall and spring is comparable for the 2020-21 academic year, but is up by almost 10% from the 2019-20 academic year. Table 5 gives an overall breakdown of application results in the course:

Table 5: CIS 146

Academic Year	Word	Excel	PPT	Overall
*2018-19	78%	68%	77%	66%
2019-20	75%	70%	76%	67%
2020-21	72%	68%	84%	76%

*In 2018-2019, computer skills in Word, Excel, PowerPoint, overall student performance rather than specifics.

Use of Results: Students were able to demonstrate basic application knowledge with a task-based exam that covered Word, Excel, and PowerPoint. CIS faculty added additional emphasis on the importance of the certification exam for students as well as encouraging students to practice for the certification exam.

Action Taken for Improvement: After reviewing the measurement results, CIS faculty will create on-demand learning videos for each application to assist students with learning the skills necessary to achieve success. Practice exams will be incorporated as part of the course requirements prior to taking the certification.

CIS faculty will continue to promote the certification and the correlation of showing Microsoft Office competencies to future employers. Additionally, faculty will incorporate the practice exam into the course and encourage student to complete it prior to taking the certification exam.

Student Learning Outcome 5: Science

Students will demonstrate scientific literacy through factual knowledge, understanding theoretical concepts, and fundamental principles in natural sciences and the application of scientific principles and methodologies to solve scientific problems.

The SLO assesses scientific knowledge in three courses: Chemistry 111, Biology 103, and Physical Science 111. All science courses are the first course in a science sequence. The general education science requirement is eight credit hours in a science laboratory course.

Chemistry 111

Assessment Results: The chemistry faculty established a 70% benchmark for mastery of the chemistry SLO. During the 2020-2021 academic year, percent of students passing the identified SLO questions was not met. The results reflect: Area 1 - 58%, Area 2 - 58%, Area 3 - 50%, and Area 4 - 67% with an average mastery of 58%.

Use of Results: The average mastery of the three areas reflects average of 58% mastery, which is below the benchmark of 70%. This is a 10% decrease from the previous academic year. This could be attributed to students moving to a virtual environment for the majority of the instruction. Thus, students had to rely on the textbook and virtual lecture material and did not get the hands-on experience of applying concepts in a lab.

Action Taken for Improvement: To improve the mastery of this SLO, the chemistry faculty will increase the amount of in-class or live-session quizzing using Quizlet and provide supplementary study tools. In addition, the mastery of the chemistry SLO will hopefully improve with the class moving back to a traditional face-to-face instructional mode.

Biology 103

Assessment Results: The biology faculty established a 70% mastery for the Biology 103 SLO. During the 2020 - 2021 period, 78.1% were successful in Area I- Factual Information, 42.8% were successful in Area II- Concepts and Principles, and 58.9% were successful in Area III- Ability to apply biological principles and methodology to solve biological problems. The overall mastery was 60%.

Additionally, reviewing the three comparison of the biology SLO, there have been small gains in improvement. There is still more work to be done to meet the established benchmark for biology.

Use of Results: The average mastery of the three areas reflects average of 60% mastery, which is below the benchmark of 70%. This is a 2% increase from the previous academic year. After reviewing the data, students are mastering factual information but a struggling with concepts and principles and applying biological principles and methodology. This could be attributed to students moving to a virtual environment for the majority of the instruction. Thus, students had to rely on the textbook and virtual lecture material and did not get the hands-on experience of applying concepts in a lab.

Action Taken for Improvement: Biology faculty have added additional resources in Blackboard (learning management system) for students to review as well as holding review sessions before the cumulative final exam. Lead instructor and adjuncts collaborated to ensure labs and instructional materials are similar

between sections. Emphasis is placed on students are receiving similar instruction because the SLO is assessed using the same questions on the final exam.

Additionally, the biology department will implement the student resources in McGraw- Hill Connect. Implementing these resources will provide students with reinforcement of concepts and principles introduced in class.

Physical Science 111

Assessment Results: The physical science instructor established a 70% mastery identified questions to demonstrate scientific literacy in physical science. During the 2020 - 2021 period, 78% were successful in Area I: Astronomy, 71% were successful in Area II: Geology, 78% were successful in Area III: Meteorology and 56% were successful in Area IV: Oceanography. The average mastery of all four SLO questions was 71%.

Use of Results: The average mastery of all four areas reflects an average of 71% mastery, which meets the benchmark of 70%. This was a decrease from the previous academic year. This could be attributed to students moving to a virtual environment for instruction. Thus, students had to rely on textbook assignments and lecture material and did not get the hands-on experience of applying concepts in a physical lab.

Action Taken for Improvement: To improve the mastery of this SLO, the faculty member will increase the amount of in-class or live-session quizzing using Quizlet and provide supplementary study tools. In addition, the mastery of the physical science SLO will improve with science classes moving back to a traditional face-to-face instructional mode. Table 6 is a composite of the data collected for the Science general education SLOs:

Table 6: Science

Academic Year	Mastery of CHM111	Mastery of BIO103	Mastery of PHS111
2018-19	50%	54%	80%
2019-20	68%	58%	87%
2020-21	58%	60%	71%

Summary

The 2018-21 data has provided a road map for an in-depth analysis of the general education core competencies. The results are used to engage general education faculty in professional development that will focus on instructional and assessment strategies to improve student learning in general education courses.

The results from the data collected in the General Education Assessment Report for 2020-21 reflect students mastered the technology and physical science student learning outcomes. Further review of the data reflect students are having difficulty mastering the identified student learning outcomes in the other identified general education disciplines; however, there have been slight improvements over the past three years. Additionally, improvements are needed in all general education disciplines to meet and surpass the established benchmarks. A thorough review of general education student learning outcomes with general education faculty will be done in the summer of 2022 to make needed modifications and identify professional development needs for faculty.

APPENDIX

ACCUPLACER Score Guide Fall 2018

MATH PLACEMENT	
Score	Course
(EA) 20 – 59	MTH 098 Elementary Algebra
(EA) 60 – 79 (CLM) 20 – 49	MTH 100 Intermediate College Algebra
(EA) 80 – 120 (CLM) 50 – 59	MTH 110 Finite Mathematics (AA), or MTH 112 Precalculus Algebra (AS) If not sure, then MTH 112. Note: AAS students may choose to take MTH 100.
(CLM) 60 – 79	MTH 113 Precalculus Trigonometry, or MTH 120 Calculus and Its Applications
(CLM) 80 – 120	MTH 125 Calculus I
ENGLISH PLACEMENT	
Score	Course
0 – 3	ENR 098 Writing and Reading for College
4	ENG 101 English Composition I **and** ENG 099 Introduction to College Writing
≥ 5	ENG 101 English Composition I

ACCUPLACER Score Guide Spring 2019

MATH PLACEMENT	
Score	Course
(EA) 20 – 49	MTH 098 Elementary Algebra
(EA) 50 – 59	MTH 100 Intermediate College Algebra **and** MTH 099 Support for MTH 100
(EA) 60 – 79 (CLM) 20 – 49	MTH 100 Intermediate College Algebra
(EA) 80 – 120 (CLM) 50 – 59	MTH 110 Finite Mathematics (AA), or MTH 112 Precalculus Algebra (AS) If not sure, then MTH 112. Note: AAS students may choose to take MTH 100.
(CLM) 60 – 79	MTH 113 Precalculus Trigonometry, or MTH 120 Calculus and Its Applications
(CLM) 80 – 120	MTH 125 Calculus I
ENGLISH PLACEMENT	
Score	Course
0 – 3	ENR 098 Writing and Reading for College
4	ENG 101 English Composition I **and** ENG 099 Introduction to College Writing
≥ 5	ENG 101 English Composition I