Report of General Education Assessment

2015-2020

General Education Assessment Report

Chattahoochee Valley Community College (CVCC) measures the effectiveness of its general education program using multiple assessments. The General Education Assessment Report is a composite of five 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 assessment data is collected by the faculty members assigned to the specific course sections;
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*;
8. If a change requires funding beyond the normal operating expenses for the department, a Form B budget form will be completed the following spring.

The assessment data will include student work in traditional, online, and hybrid sections. The assessment will also include a sampling of Dual Enrollment courses in the General Education Area (English and Math).

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.

Assessment Results: The sample of composition English 101 and English 102 papers indicated the commission of major errors fell from 30% to 25%, a decrease of 5%. The sample also indicated the commission of minor errors decreased from 89% to 65%, a decrease of 24%. The sample further indicated the commission of documentation errors decreased from 25% to 21%, a decrease of 4%. Of the English 101 essays, 23% of papers contained major errors, 68% contained minor errors, and 23% contained documentation errors. Of the English 102 essays, 27% contained major errors, 63% contained minor errors, and 13% contained documentation errors. Table 1 reflects the data of writing skills SLO:

Table 1 ENG 101 and ENG 102

Academic Year	Major Errors	Minors Errors	Documentation Errors	Pass Rate of a "C" or better	Withdrawal Rate
2015-16	48%	91%	28%	63%	16%
2016-17	35%	93%	23%	56%	22%
2017-18	35%	86%	10%	62%	18%
2018-19	30%	89%	21%	60%	16%
2019-20	25%	65%	21%	64%	14%

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. In Fall 2018, ACCS eliminated developmental English and Reading courses. ENR094 was renamed to ENR098 integrating writing and reading and implemented a co-requisite learning support course, ENG099, to support the student's success in English 101. The pass rate for the ENG099 co-requites course was 50% for 2018-19 and 52% in 2019-2020. See Appendix for Placement Guidelines.

Use of Results: These results are promising; however, they are not indicative of efforts made by the department due to the huge changes made in light of the COVID-19 shutdown. In an effort to make online-learning more accessible and doable, the department will increase its use of online tools and resources for students.

Action Taken for Improvement: The department implemented a preemptive email for online students allowing students to evaluate whether an online course was truly right for them. This diagnostic essay worked very well. Due to the COVID shutdown, the fifth essay was made optional at the end of the semester in an effort to encourage students to complete their coursework. The state requires four extended essays (a requirement the College met, though some students opted-out of the fifth paper).

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: A random sample of Public Speaking rubrics revealed (compared to 2018-2019), organization was 85% (a decrease of 2%), convention was 84% (a decrease of 1%), and Style/Impact was 85% (an increase of 1%). In 2017-18, the assessment of oral communication was modified. The content requirement of Public Speaking was removed from the assessment rubric. The revised Public Speaking rubric focuses on organization, convention, and style of student speech. The departmental final exam was removed after the 2017-18 academic year as an assessment measure, because it did not provide sufficient data to measure oral communication effectiveness. Table 2 demonstrates the results of the oral communication SLO:

Table 2: Public Speaking 107

Academic Year	Content	Organization	Convention	Style	Overall Final Exam	Pass Rate of a "C" of better	Withdrawal Rate
2015-16	88%	88%	85%	85%	95%	70%	10%
2016-17	85%	85%	88%	88%	96%	66%	7%
2017-18	N/A	85%	84%	83%	91%	62%	9%
2018-19	N/A	87%	85%	84%	N/A	67%	14%
2019-20	N/A	85%	84%	85%	N/A	69%	12%

Use of Results: Continued use of the impromptu speech assignment appears to improve students' content development and will be used in future assessment. The student competency proficiency on the department final exam will no longer be used.

Action Taken for Improvement: Public Speaking faculty will continue to use the rhetorical triangle approach (the writer-the audience-the context) to prepare students to complete speech assignments.

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 Math 100 and Math 112.

Math 100: Students will be able to: a) apply concepts of linear equations and inequalities in two variables (SLO 1), b) solve systems of equations (SLO 2), c) perform operations with rational expressions and solve rational equations (SLO 3), d) perform operations with radical expressions and solve radical equations (SLO 4), and e) solve quadratic equations (SLO 5).

Assessment Results: Based on students taking the final exam, 64.1% of the students mastered at least three of the SLOs. Additionally, 43.1% mastered at least four of the SLOs. Table 3 reflects the percent of mastery of each SLO for Math 100.

Table 3: MATH 100 Mastery

Academic Year	Mastery of SLO 1	Mastery of SLO 2	Mastery of SLO 3	Mastery of SLO 4	Mastery of SLO 5	Mastery of all 3 SLOs	Mastery of 3 of 5 SLOs	Mastery of 4 of 5 SLOs	Pass Rate of a "C" or better	Withdrawal Rate
2015-16	90%	69%	59%	N/A	N/A	46%	N/A	N/A	60%	14%
2016-17	73%	76%	57%	**68%	**61%	N/A	**73%	N/A	58%	13%
2017-18	73%	82%	49%	67%	67%	N/A	73%	N/A	60%	13%
2018-19	68%	71%	44%	61%	55%	N/A	65%	N/A	50%	18%
2019-20	72%	67%	47%	58%	50%	N/A	N/A	***43%	56%	13%

** added 2 more SLOs with new goal of mastery of 3 out of 5 SLOS
*** Mastered 4 of the 5 SLOs

The math curriculum was restructured based on the recommendation of the ACCS College Readiness Task Force to a follow a co-requisite model to increase the number of students entering college-level math. Spring 2019, ACCS eliminated developmental math courses MTH080, MTH090, MTH091 and MTH092. MTH098 Elementary Algebra transitioned to a four-credit hour developmental math course. ACCS implemented a co-requisite learning support course, MTH099, to support student success in Math 100 and was offered Fall 2019. The 2019-20 pass-rate in Math 099 was 71% (see Appendix for placement guidelines).

Use of Results: The Math 099 co-requisite will continue to be offered to support students who meet placement guidelines in both Math 100 and Math 099. Additional time is needed to teach quadratic functions based on the data. Students are struggling with this math concept. Additionally, instructional videos are needed to cover course objectives to help students.

Action Taken for Improvement: MTH 099 was offered and students seemed to find it helpful. Students struggling will be contacted and encouraged to make use of instructor's office hours and/or the Tutoring Center to help with mastering course objectives. Instructors will offer retests on at least the first test.

<u>Math 112:</u> Students will be able to: a) apply basic concepts of functions (SLO 1), b) apply concepts of polynomial and rational functions (SLO 2), c) solve exponential and logarithmic functions (SLO 3), and d) apply concepts of systems of equations and inequalities (SLO 4).

<u>Assessment Results:</u> Based on students taking the final exam, 56.6% of the students mastered at least two of the SLOs. The math curriculum was restructured based on the recommendation of the ACCS College Readiness Task Force to a follow a co-requisite model to increase the number of students entering college-level math. A co-requisite learning support courses, MTH111, was implemented to support student success in Math 112. Therefore, SLO 4 for Math 112, with the addition of the Math 112 co-requisite, was not assessed. The co-requite course, Math 111, was offered Fall 2019. The pass-rate for Math 111 was 75%. Table 4 reflects the percentage of mastery for each SLO:

<div align="center">Table 4: Math 112 Mastery</div>

Academic Year	Mastery of SLO 1	Mastery of SLO2	Mastery of SLO 3	Mastery of SLO 4	Mastery 2 of 3 SLOs	Mastery 3 of 4 SLOs	Mastery of all 4 SLOS	Pass Rate of 'C' or better	With-drawal Rate
2015-16	85%	57%	50%	N/A	N/A	N/A	41%	68%	17%
2016-17	75%	48%	47%	N/A	N/A	**70%	28%	58%	14%
2017-18	76%	50%	64%	66%	N/A	59%	28%	66%	8%
2018-19	63%	52%	47%	65%	N/A	53%	N/A	62%	13%
2019-20	57%	54%	55%	N/A	***57%	N/A	N/A	59%	15%

** Added new SLO and mastery of 3 out of 4 SLOs
*** Mastery of 2 out of 3 SLO

<u>Use of Results:</u> Based on the data, students are not gasping the rigor of the course. Instructors will need to reexamine their instructional approach to assist students with the challenging course content.

<u>Action Taken for Improvement:</u> Students were encouraged to attend class and spend adequate time outside of class. Instructors were available for office hours and some held extra study sessions prior to tests. In addition, students were told about CVCC's free tutoring services. Instructors provided the objectives or a review to students prior to exams. Students were offered retests on at least the first test. Instructors devoted more time to SLO 3 – Exponential and Logarithmic Functions.

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.

In 2016-17, the assessment method was changed to an 'overall student performance' rather than specific computer skills because students demonstrated mastery of the skills over a four-year period.   Beginning in 2018-19, computer skills in Word, Excel and PowerPoint, and overall student performance was assessed.

Assessment Results: Students were given a certification exam that encompassed Microsoft Word, Excel, and PowerPoint. The average success rate for obtaining the TestOut Desktop Professional Certification was 66% for Fall 2019, and 67% for the Spring 2020 academic year. The overall score for Spring was up by 16%, while the Fall overall score was down by 1% from the 2018-19 academic year. Table 5 gives an overall breakdown of application results in the course:

Table 5: CIS 146

Academic Year	Word	Excel	Access	PPT	Overall	Pass Rate with a "C" or better	Withdrawal Rate
2015-16	92%	69%	83%	100%	86%	74%	12%
2016-17	NA	NA	NA	NA	84%	71%	16%
2017-18	NA	NA	NA	NA	84%	70%	19%
2018-19	78%	68%	N/A	77%	66%	65%	14%
2019-20	75%	70%	N/A	76%	67%	64%	14%

Use of Results: Students as a whole were not able to demonstrate basic application knowledge with a task-based exam that covered Word, Excel, and PowerPoint. Instructors need to add additional emphasis on the importance of the certification exam for the student.

Action Taken for Improvement: After discussing the measurement results, CIS instructors think that the certification should remain part of the course. Incorporate the practice exam into the course and encourage students to complete it prior to taking the certification.

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 science general education requirement is eight credit hours in a science laboratory course.

Chemistry 111 Assessment Results: During the 2018-2019 academic year, only 50% of students passed the final exam with a score of 70% or higher. In Fall of 2019, three of the total 13 students that took the standardized assessment questions, passed with a 70% or above (a pass rate of only 30%). In Spring 2020, 7 out of 9 students passed the assessment questions with a 70% or higher. Dual Enrollment had a 100% pass-rate meeting the goal. In addition, individual areas were assessed. In Fall 2019, Area 4 (Structure and Geometry) was the only area of students showing proficiency passing 2 out of 3 related questions (70%). In Spring 2020, students showed proficiency in Area 1 (Quantum Theorem), Area 2 (Stoichiometry), and Area 4 (Structure and Geometry). Area 3 (Chemical Equations) was the only deficient area, falling short at a pass rate of 67%. The overall mastery of the four areas is 73%.

Use of Results: At the end of Fall 2019, assessment results were analyzed and the outcome of Areas 1-3 were isolated as areas in which students are not gaining comprehension. For Spring 2020, additional lecture time was set aside for problem-solving in these areas. Extra examples were given and the content was reinforced in lab activities. Guided notes were given to students with specific examples cited for importance. A practice problem list was made to give students for guidance on types of problems to practice. The changes made to instruction resulted in an improvement in all areas except Area 3 (Chemical Equations).

Action Taken for Improvement: Guided notes and additional lecture time for problem-solving will be continued for Areas 1, 2, and 4. Area 3 has been highlighted as an area that needs additional reinforcement. More time will be spent on balancing chemical equations and on writing net ionic equations, as these two areas seem to be the most challenging for students. Additionally, online resources with problem-solving examples have been made accessible to students to supplement classroom and PowerPoint lectures.

Biology 103 Assessment Results: In Fall 2019, 151 students were tested. 73.5% correctly answered questions in Area 1 (Factual Information), 40.3% correctly answered questions in Area 2 (Concepts and Principles), 47.7% correctly answered questions in Area 3 (Ability to apply biological principles and methodology to solve biological problems). In Spring 2020, 120 students were tested. Of the 120 students, 85.8% correctly answered questions in Area 1; 40.8% correctly answered questions in Area 2; 58.3% correctly answered questions in Area 3.

Use of Results: We will continue this Unit Plan goal. The Lead Instructor feels all students in general studies taking BIO 103 need to continue this goal based on her experience with the students.

Action Taken for Improvement: Instructors began adding additional resources for students to review, as well as held review sessions before the final exam with post-test questions. The Lead Instructor and Adjunct Instructors work closely to ensure labs and materials are similar between sections and also students are receiving similar instruction.

Physical Science Assessment Results: During the 2018-2019 academic year, the goal of a 70% pass-rate in all four areas was not achieved; Meteorology being the deficient area. As of Fall 2019, the consolidation of results from both course sections resulted in all four areas receiving passing rates. Pass-rates of these four areas are as follows: Astronomy 100%, Geology 89%, Meteorology 74%, and Oceanography 95%. This result was repeated in Spring 2020. Looking at each section individually, the online course did not meet the pass rate in the area of Meteorology, but not in numbers large enough to sway the overall consolidated total.

<u>Use of Results:</u> Classroom strategies of PowerPoint lecture reinforced by assigned homework and offering of guided notes appear to be successful. These practices will be continued.

<u>Action Taken for Improvement:</u> While the consolidated assessment resulted in an overall pass rate, the area of meteorology continues to sow the highest challenge in student comprehension. Extra resources will be given to reinforce comprehension in meteorology. In addition, instructors of both traditional and online formats will meet to discuss and find common methods that will be used in both formats of instruction. Table 6 is a composite of the data collected for the Science general education student learning outcome:

Table 6: Science

Academic Year	Mastery of CHM111	Pass Rate	Mastery of BIO103	Pass Rate	Mastery of PHS111	Pass Rate	Pass rate with a "C" or better	Withdrawal Rate
2015-16	83.3%	*50%	30%	62%	56%	66%	68%	12%
2016-17	85%	78%	31%	82%	89%	74%	76%	9%
2017-18	75%	47%	29%	71%	71%	62%	60%	14%
2018-19	50%	50%	54%	72%	80%	60%	61%	14%
2019-20	73%	60%	58%	64%	90%	54%	59%	14%

*CHM 111 was only offered Fall 2015

Summary

The results from the data collected in the General Education Assessment Report reflect students are having difficulty mastering the outlined student learning outcomes in Math and Science. There have been improvements in the writing skills over the past five years, but additional improvement is needed to meet the baseline measurement. The data reflects students are mastering the Oral Communication and Technology student learning outcomes.

The 2015-20 data has provided a road map for an in-depth analysis of the general education core competencies. The results will be 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.

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