Crime Scene Technology Department Assessment Report
Spring 2022

Author: Joseph F. van Gaalen, Ph.D., Asst. VP of Institutional Research, Assessment & Effectiveness

1 INTRODUCTION

Florida SouthWestern State College's Crime Scene Technology Department began a new era in assessment with AY 2019-20 in which new assessments were created in conjunction with a turnover in faculty for the program. The courses included in this new assessment plan are CJE 2670 *Introduction to Forensic Science*, CJE 2671 *Latent Fingerprint Development*, and CJE 2770 *Crime Scene Photography*. The assessment outcomes are intended to provide a baseline and measurement of achievement moving forward as well as investigate the strength and performance of items in the exam. The assessment plan also provides comparisons by modalities to include face-to-face, asynchronous online, live online, flex, blended, and dual enrollment, where possible. Where data is sufficient, additional analyses are provided including distribution studies and longitudinal studies.

For additional detail or further analysis not provided in this report, please contact Dr. Joseph F. van Gaalen, Asst. Vice President of Institutional Research, Assessment & Effectiveness, Academic Affairs (jfvangaalen@fsw.edu; x16965).

2 CJE 2670

2.1 LEARNING OBJECTIVES AND DESCRIPTIVE STATISTICS

The FSW Crime Scene Technology faculty are focused on Program Outcome 06.0 Demonstrate knowledge of crime scene safety in this assessment. The goal for AY 2021-22 is that by the end of Fall 2021, a second year of the pilot of the assessment will be completed at which a baseline of achievement will be created for future assessment. The assessment utilized for the study is "Homework Assignment #4" focusing on the topics of bloodstain patterns, protective gear, and proper safety methods. The rubric dimension (outcome achievement measure) utilized for the assignment is shown in Table 1 below.

Criteria	Ratings					Pts
This criterion is linked to a Learning OutcomeCJE 2670 LO 06.05 Demonstrate knowledge of the understanding of safe and proper methods of handling biological evidence at a crime scene. threshold: 4.0 pts	**5.0 pts Exceeds Expectations**	**4.0 pts Mastered Expectations**	**3.0 pts Meets Expectations**	**2.0 pts Minimally Meets Expectations**	**1.0 pts Does Not Meet Expectations**	5.0 pts
Total Points: 5.0						

Table 1. Rubric utilized for assessment.

During the Spring 2022 semester, an enrollment of 20 contributed to scores tallied from 1 of 1 sections of CJE 2670. Descriptive statistics for achievement of outcomes are shown in Table 2. In total, 100% of artifacts scored achieved mastery ('4' or higher on the rubric).

N	20
MAX	4
MIN	4
AVE	4.00
# Mastery	20
% Mastery	100.0%

Table 2. Descriptive statistics and achievement measures for Homework Assignment #4 utilizing the rubric shown in Table 1.

2.2 EXPLORATORY ANALYSIS AND SIGNIFICANCE TESTING

Multiple comparisons of artifact scores across varying formats, campuses, and student types were made, where possible, in order to add depth to the causes of the distribution of the artifacts. Each course was divided into the appropriate subgroups to perform the analysis. In cases where a subgroup is not represented in the course comparisons were not conducted and are noted for comprehensiveness.

2.2.1 Dual Enrollment (Concurrent) to Non-Dual Enrollment Comparison

No dual enrollment (concurrent) sections of the course are offered in this program, so no comparison study is completed.

2.2.2 Instructional Method Comparison

Only one section was run so no modality comparison could be completed.

2.2.3 Comparison by Campus/Site

Only one section was run so no site comparison could be completed.

2.3 LONGITUDINAL STUDY

The descriptive statistics and achievement measures over time for the CJE 2670 assessment is shown in Table 3 below. Achievement for the Spring 2022 term remains similar to that of the first year of the study.

	N	MAX	MIN	AVERAGE	# MASTERY	% MASTERY
FALL 2020	30	5	0	4.8	29	97%
FALL 2021	20	5	3	4.9	19	95%
SPRING 2022	20	4	4	4.0	20	100%

Table 3. Descriptive statistics and achievement measures over time for CJE 2670 assessment.

3 CJE 2671

3.1 LEARNING OBJECTIVES AND DESCRIPTIVE STATISTICS

The FSW Crime Scene Technology faculty are focused on Program Outcome 03.0 Demonstrate knowledge of fingerprint development and preservation in this assessment. The goal for AY 2021-22 is that by the end of Fall 2021, an assessment will be completed to continue to establish a baseline of achievement will be created for future assessment. The assessments utilized for the study are Homework Assignments #1, #2, and #3. The rubric dimension (outcome achievement measure) utilized for the assignment is shown in Table 4 below.

5.0 pts Exceeds Expectations	4.0 pts Mastered Expectations	3.0 pts Meets Expectations	2.0 pts Minimally Meets Expectations	1.0 pts Does Not Meet Expectations

Table 4. Rubric utilized for assessment.

No course sections were run during the Spring 2022 term, so no study was completed.

4 CJE 2770

4.1 LEARNING OBJECTIVES AND DESCRIPTIVE STATISTICS

The FSW Crime Scene Technology faculty are focused on three outcomes. An outline of each assignment and which outcome it measures is listed below:

➢ LO 01.01: Demonstrate ability to use manual, automatic, and digital cameras.
  o Homework Assignment #3
  o Homework Assignment #5
➢ LO 01.06: Demonstrate knowledge of specialized photo equipment used in crime scene labs.
  o Homework Assignment #1

> ➢ LO 01.07: Demonstrate ability to use different types of light sources used in evidence detection.
>   o Homework Assignment #6

The assessments utilized for the study are Homework Assignments #1, #3, #5, and #6. The rubric dimension (outcome achievement measure) utilized for the assignment is shown in Table 5 below.

5.0 pts Exceeds Expectations	4.0 pts Mastered Expectations	3.0 pts Meets Expectations	2.0 pts Minimally Meets Expectations	1.0 pts Does Not Meet Expectations

Table 5. Rubric utilized for assessment.

During the Spring 2022 semester, an enrollment of 18 contributed to scores tallied from 1 of 1 sections of CJE 2770. Descriptive statistics for achievement of outcomes are shown in Tables 6, 7, and 8. In total, 88% of artifacts achieved mastery ('4' or higher on the rubric) in HW #3 while 83% achieved mastery for HW #5, both of which are aligned to LO 01.01. For LO 01.06, 94% of artifacts achieved mastery with the aligned assignment (HW #1). And finally, for LO 01.07, 94% of artifacts achieved master with the aligned assignment (HW #6).

HW #3		HW #5	
N	17	N	18
MAX	5	MAX	5
MIN	2	MIN	2
AVE	4.24	AVE	4.17
# Mastery	15	# Mastery	15
% Mastery	88.2%	% Mastery	83.3%

Table 6. Descriptive statistics and achievement measures for LO 01.01 as measured by Homework Assignment #3 and #5 utilizing the rubric shown in Table 5.

HW #1	
N	18
MAX	5
MIN	3
AVE	4.61
# Mastery	17
% Mastery	94.4%

Table 7. Descriptive statistics and achievement measures for LO 01.06 as measured by Homework Assignment #1 utilizing the rubric shown in Table 5.

HW #6	
N	18
MAX	5
MIN	3
AVE	4.61
# Mastery	17
% Mastery	94.4%

Table 8. Descriptive statistics and achievement measures for LO 01.07 as measured by Homework Assignment #6 utilizing the rubric shown in Table 5.

4.2   EXPLORATORY ANALYSIS AND SIGNIFICANCE TESTING

Multiple comparisons of artifact scores across varying formats, campuses, and student types were made, where possible, to add depth to the causes of the distribution of the artifacts. Each course was divided into the appropriate subgroups to perform the analysis. In cases where a subgroup is not represented in the course comparisons were not conducted and are noted for comprehensiveness.

4.2.1   Dual Enrollment (Concurrent) to Non-Dual Enrollment Comparison

No dual enrollment (concurrent) sections of the course are offered in this program, so no comparison study is completed.

4.2.2   Instructional Method Comparison

Only one section was run so no modality comparison could be completed.

4.2.3   Comparison by Campus/Site

Only one section was run so no site comparison could be completed.

4.3   LONGITUDINAL STUDY

The descriptive statistics and achievement measures over time for the CJE 2770 assessment is shown in Table 9 below. Achievement for the Spring 2022 across the four assessments over the three terms of study ranks 2nd, 3rd, 3rd, and 2nd.

	HW #3 % MASTERY	HW #5 % MASTERY	HW #1 % MASTERY	HW #6 % MASTERY
FALL 2020	96%	92%	100%	100%
FALL 2021	86%	93%	97%	89%
SPRING 2022	88%	83%	94%	94%

Table 9. Descriptive statistics and achievement measures over time for CJE 2770 assessment.

5   CONCLUSIONS

FSW's Business Department gathers a multitude of data from various courses as assessment tools in support of the Florida Department of Education Curriculum Framework. The courses included in this new assessment plan are CJE 2670 *Introduction to Forensic Science*, CJE 2671 *Latent Fingerprint Development*, and CJE 2770 *Crime Scene Photography*. The assessment outcomes are intended to provide a baseline and measurement of achievement moving forward as well as investigate the strength and performance of items in the exam.

5.1   CJE 2670

A drill-down of CJE 2670 results are as follows:
1.   In a study of outcome achievement, an enrollment of 20 contributed to scores tallied from 1 of 1 sections of CJE 2670. In total, 100% of artifacts scored achieved mastery ('4' or higher on the rubric).
2.   No dual enrollment (concurrent) sections of the course are offered in this program, so no comparison study is completed.
3.   Only one section was run so no modality comparison could be completed.

4. Only one section was run so no site comparison could be completed.
5. In a longitudinal study, achievement for the Spring 2022 term remains similar to that of the first year of the study.

5.2   CJE 2671

A drill-down of CJE 2671 results are as follows:
1. No course sections were run during the Spring 2022 term, so no study was completed.

5.3   CJE 2770

A drill-down of CJE 2770 results are as follows:
2. In a study of outcome achievement, an enrollment of 18 contributed to scores tallied from 1 of 1 sections of CJE 2770. In total, 88% of artifacts achieved mastery ('4' or higher on the rubric) in HW #3 while 83% achieved mastery for HW #5, both of which are aligned to LO 01.01. For LO 01.06, 94% of artifacts achieved mastery with the aligned assignment (HW #1). And finally, for LO 01.07, 94% of artifacts achieved master with the aligned assignment (HW #6).
3. No dual enrollment (concurrent) sections of the course are offered in this program, so no comparison study is completed.
4. Only one section was run so no modality comparison could be completed.
5. Only one section was run so no site comparison could be completed.
6. In a longitudinal study, achievement for the Spring 2022 across the four assessments over the three terms of study ranks 2nd, 3rd, 3rd, and 2nd.