

Program Assessment: Annual Report

Program(s): Forensic Science
Department: Sociology and Anthropology
College/School: Arts and Sciences
Date: June 23rd, 2022
Primary Assessment Contact: Erik Hall

1. Which program student learning outcomes were assessed in this annual assessment cycle?

Goal #2. Forensic Science majors will understand the role of Research Methods in Forensic Science.

Learning Outcomes:

- a) demonstrate an understanding of the chain of custody of artifacts/evidence,
- b) demonstrate an understanding of the appropriate types and instruments of forensic science analysis,
- c) demonstrate the correct interpretation of appropriate forensic science evidence.

2. What data/artifacts of student learning were collected for each assessed outcome? Were Madrid student artifacts included?

Direct measures including laboratory reports from forensic science majors in Forensic Biology and Crime Scene Investigation – in addition final ‘capstone’ papers were used from crime scene investigation were used to assess the goals. In addition, exit interviews with graduating seniors in Forensic Science were used to assess the goals

3. How did you analyze the assessment data? What was the process? Who was involved?

NOTE: If you used rubrics as part of your analysis, please include them in an appendix.

For the lab reports and capstone projects, a standard rubric was used (see attached) and included all three of the goals listed above and a numbering scale of 1-5. The exams and rubric were distributed to 2 faculty members (Erik Hall and Erica Mpoy) for review and scoring. The results were then tabulated and averaged together. The exit interviews were conducted by Dr. Richard Colignon and Director of Forensic Science, Erik Hall with 9 of our graduating seniors in an in-person roundtable format prior to graduation.

4. What did you learn from the data? Summarize the major findings of your analysis for each assessed outcome.

NOTE: If necessary, include any tables, charts, or graphs in an appendix.

The data showed that overall the students were meeting the learning objectives (See attached excel sheet with scoring averages). Learning objectives 2 and 3 were scored with an average above 4 across all students. Many of the laboratory reports received a 5/5 or 4/5 on the rubric across the reviewers and showed that a wide variety of students were meeting and exceeding the expectations of our goals. In addition it was shown that the depth of knowledge spread across disciplines (Biology and Crime Scene). It

was evident that additional laboratory testing was needed in chain of custody as there were very few mentions of chain of custody throughout the assignments. It was also evident from the exit interviews conducted with graduating seniors that chain of custody was able to be explained, used in a scenario, and conveyed accurately during a conversation. The students are clearly getting the theory in class and are able to explain in a scenario, they just need further instruction to incorporate into the laboratory report. Students also expressed additional interest in a testimony and/or seminar style class for seniors during the exit interviews.

5. How did your analysis inform meaningful change? How did you *use the analyzed data to make or implement recommendations for change* in pedagogy, curriculum design, or your assessment plan?

One of the ways in which we can improve the content of the program is to emphasize the use of chain of custody in assignments in a better manor. We are in the process of redesigning crime scene investigation to meet the collaborative inquiry core requirements and chain of custody can be more heavily incorporated into the group project and the laboratory assignments in general. It is believed by formally stating chain of custody on the lab directions that students will focus on that aspect of the crime scene in greater detail than what they currently are doing. In addition this material was passed along to instructors of all the laboratory courses during our fall retreat to ensure everyone was notified and institutes greater control of chain of custody in the laboratory setting. The faculty were receptive to the idea and will work to incorporate chain of custody into the labs in a more meaningful way. In order to address the seminar style upper division class we are creating contacts with the SLU law school as well as Washington University Law School to have law students come into our seminar style class and ask challenging expert questions to our students in a mock trial setting. Once additional faculty are hired in the forensic science program, additional class such as this seminar class can become a reality.

6. Did you follow up (“close the loop”) on past assessment work? If so, what did you learn? (*For example, has that curriculum change you made two years ago manifested in improved student learning today, as evidenced in your recent assessment data and analysis?*)

We put into place this past year a course called ‘Topics in Forensic Science’ which was a sophomore level class which spent significant time discussing expert testimony, quality assurance, and ethics in a crime laboratory standpoint. While the class was successful at introducing students to those concepts as well as creating a bridge course for sophomore forensic science majors, it is clear that additional advanced level testimony practice is desired by the students as was learned by conversations with junior and senior level students. With the addition of new faculty in the future we believe this would be a possibility to offer a senior level seminar course which would address the issues seen during this years exit interviews as well as continue to close the gap on testimony practice which was desired in the past assessments. In addition a couple of years ago we put into place major only labs in forensic biology, forensic chemistry, and crime scene investigation. This group of graduating seniors was one of the first ones who fully participated in the labs split out by major and the response was great. The students really appreciated the instructors not having to explain the basic scientific principles which were previously learned in chemistry and biology labs. In addition talking with forensic science minors it is clear this benefitted them as well since they didn’t have to worry about keeping up with the forensic science majors in the class and lab. We will continue to run the lab classes in this manner moving forward.

IMPORTANT: Please submit any revised/updated assessment plans to the University Assessment Coordinator along with this report.

Rubric for Assessing Goal #2

Paper # _____ Last Name _____

1. Does the student demonstrate an understanding of the chain of custody of artifacts/evidence

Poor

Adequate

Excellent

1

2

3

4

5

Not applicable
to paper's topic

Comments:

2) Does the student demonstrate an understanding of the appropriate types and instruments of forensic science analysis

Poor

Adequate

Excellent

1

2

3

4

5

Not applicable
to paper's topic

Comments:

3) Does the student demonstrate the correct interpretation of appropriate forensic science evidence

Poor

Adequate

Excellent

1

2

3

4

5

Not applicable
to paper's topic

Comments:

2021 Forensic Science Program Review Direct Measures

Does the student identify major concepts and their categories of evidence

Artifact	Scoring			Average
	Ric	Mary	Erik	
SA FB	5	5	5	5
SR FB	5	5	5	5
PW FB	4	5	5	4.7
BS CF	3.5	5	5	4.5
VP CF	5	5	5	5
OC CF	3.5	5	5	4.5
GJ CS	3	4	5	4

Does the student identify trends in the field of forensic science

Artifact	Scoring			Average
	Ric	Mary	Erik	
SA FB	N/A	4	5	4.5
SR FB	N/A	4	5	4.5
PW FB	N/A	4	4	4
BS CF	N/A	5	5	5
VP CF	N/A	5	5	5
OC CF	N/A	5	5	5
GJ CS	N/A	N/A	N/A	0

Does the student identify the scientific and empirical basis of forensic science investigative and analytic methods

Artifact	Scoring			Average
	Ric	Mary	Erik	
SA FB	5	5	5	5
SR FB	5	5	5	5
PW FB	3.5	5	5	4.5
BS CF	5	5	5	5
VP CF	5	5	5	5
OC CF	5	5	5	5
GJ CS	4	4	5	4.3

2022 Forensic Science Program Review Direct Measures

Does the student demonstrate an understanding of the chain of custody of artifacts/evidence

Artifact	Scoring		
	Erik	Erica	Average
GP 1	3	2	2.5
GP 2	5	5	5
SA CS	N/A	N/A	0
KS CS	N/A	N/A	0
IF FB	N/A	N/A	0
NO FB	N/A	N/A	0
JG FB	N/A	N/A	0
EL CS	N/A	N/A	0

Does the student demonstrate an understanding of the appropriate types and instruments of forensic science analysis

Artifact	Scoring		
	Erik	Erica	Average
GP 1	3	2	2.5
GP 2	5	5	5
SA CS	5	5	5
KS CS	5	3	4
IF FB	4	4	4
NO FB	4	4	4
JG FB	4	4	4
EL CS	5	3	4

Does the student demonstrate the correct interpretation of appropriate forensic science evidence

Artifact	Scoring		
	Erik	Erica	Average
GP 1	4	4	4
GP 2	5	5	5
SA CS	5	5	5
KS CS	5	3	4
IF FB	4	4	4
NO FB	4	4	4
JG FB	3	3	3
EL CS	5	3	4