

Program-Level Assessment: Annual Report

Program Name (no acronyms): Forensic Science

Department: Sociology and Anthropology

Degree or Certificate Level: Bachelor of Science

College/School: Arts and Sciences

Date (Month/Year): June 2021

Assessment Contact: Erik Hall/Richard Colignon

In what year was the data upon which this report is based collected? 2020-2021

In what year was the program's assessment plan most recently reviewed/updated?

1. Student Learning Outcomes

Which of the program's student learning outcomes were assessed in this annual assessment cycle? (Please list the full, complete learning outcome statements and not just numbers, e.g., Outcomes 1 and 2.)

Goal 1: Forensic Science majors will understand appropriate patterns of Career Planning and Professional Development.

Goal 2: Does the student identify trends in the field of forensic science?

Goal 3. Does the student identify the scientific and empirical basis of forensic science investigative and analytic methods?

2. Assessment Methods: Artifacts of Student Learning

Which artifacts of student learning were used to determine if students achieved the outcome(s)? Please describe and identify the course(s) in which these artifacts were collected. Clarify if any such courses were offered a) online, b) at the Madrid campus, or c) at any other off-campus location.

Direct measures including final exams from forensic science majors in Forensic Biology, Chemical Forensics, and Crime Scene Investigation we used to assess the goals. In addition, exit interviews with graduating seniors in Forensic Science were used to assess the goals. Madrid campus is not included. It has no forensic science courses.

3. Assessment Methods: Evaluation Process

What process was used to evaluate the artifacts of student learning, and by whom? Please identify the tools(s) (e.g., a rubric) used in the process and **include them in/with this report document** (do not just refer to the assessment plan).

For the final exams, 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 3 faculty members (Erik Hall, Richard Colignon, and Mary Vermilion) for review and scoring. The results were then tabulated and averaged together.(see Appendix 1 and Appendix 2).

4. Data/Results

What were the results of the assessment of the learning outcome(s)? Please be specific. Does achievement differ by teaching modality (e.g., online vs. face-to-face) or on-ground location (e.g., STL campus, Madrid campus, other off-campus site)?

The data showed that overall the students were meeting the learning objectives (See Appendix 2 with scoring averages). Learning objectives 1 and 3 were all scored with an average above 4 across all students. Many exams received a 5/5 on the rubric across the reviewers and showed that a majority of students were meeting and exceeding the expectations of our goals. In addition, it was shown that the depth of knowledge spread across all three disciplines (Biology, Chemistry, and Crime Scene). It was determined that there was some lack of future trends in forensic science being incorporated into the exams, this was also evident in the exit interviews.(see Appendix 3 and Appendix 4)

5. Findings: Interpretations & Conclusions

What have you learned from these results? What does the data tell you?

One of the ways in which we can improve the content of the program is to talk more specifically about new and emerging trends in forensic science. We are putting into place a course called ‘Topics in Forensic Science’ starting in the Fall 2021 semester. It is believed this course will allow for discussion of the past and current trends in forensic science in a formal setting. In addition it will be recommended that instructors in forensic biology, chemical forensics, and crime scene investigation incorporate future trends into the course if able as well as on the exams to assess the students understanding. Secondly, students expressed interest in learning more about expert testimony, wanted more practical testimony practice, and wanted to learn more tips on testifying as an expert witness. This tells us that we needed a more robust plan in place to convey the theory and practical application of expert testimony

6. Closing the Loop: Dissemination and Use of Current Assessment Findings

A. When and how did your program faculty share and discuss these results and findings from this cycle of assessment?

Email communication was sent to all Forensic Science faculty in late August to see the results of the data obtained from the exit interviews at the beginning of the Fall 2021 semester. The faculty were given the ability to give their opinions and recommendations moving forward. Two ideas were shared with the faculty to facilitate improvement based on the exit interviews.

B. How specifically have you decided to use these findings to improve teaching and learning in your program? For example, perhaps you’ve initiated one or more of the following:

Changes to the Curriculum or Pedagogies

- Course content
- Teaching techniques
- Improvements in technology
- Prerequisites
- Course sequence
- New courses
- Deletion of courses
- Changes in frequency or scheduling of course offerings

Changes to the Assessment Plan

- Student learning outcomes
- Artifacts of student learning
- Evaluation process
- Evaluation tools (e.g., rubrics)
- Data collection methods
- Frequency of data collection

Please describe the actions you are taking as a result of these findings.

A new course was in the works and will be implemented this semester called “Topics in Forensic Science”. Approximately 1/4th of the class will be devoted to expert testimony theory and practice. Instead of just lecturing on the topics law students and law professors will be joining the class to do mock testimony practice with the students. This collaboration with our law school at SLU will be beneficial to all involved and build relationships for our students and faculty. Secondly, instructors were asked to take time in their classes to discuss the future trends/technology in forensic science. The course content won’t substantially change but rather be added onto in a way that not only explores the past in forensic science, but also the future.

In addition most 3000 and 4000 level Biology and Chemistry courses and labs were added as approved elective science credits for the students in forensic science. There was some confusion amongst students as to which courses counted towards the elective science courses. Attributes are being added onto all the courses which count towards this requirement through the registrar's office starting in Fall 2021 and this can be explored during the next assessment to determine how students like or dislike the new attributes and course offerings in Biology and Chemistry.

If no changes are being made, please explain why.

7. Closing the Loop: Review of Previous Assessment Findings and Changes

A. What is at least one change your program has implemented in recent years as a result of assessment data?

In the past assessment work it was learned that students wanted more and needed more guidance and training on areas such as expert testimony and issuing surrounding testifying. We have followed up by created a new class in which multiple weeks will be devoted to these topics. This can be re-assessed with future cohorts as students begin to take the course.

B. How has this change/have these changes been assessed?

The course is being offered for the first time this semester and will be assessed after this first run of the course

C. What were the findings of the assessment?

In exit interviews graduating seniors were excited about this course being offered moving forward and wish they could have taken a course like that while they were enrolled at SLU.

D. How do you plan to (continue to) use this information moving forward?

Exit interviews and student driven ideas have been one of the ways in which the Forensic science program has continued to update and tweak the curriculum. We will continue to listen to what students are saying and the types of classes they would like to see offered and implement the best we can into the forensic science major.

IMPORTANT: Please submit any assessment tools (e.g., rubrics) with this report as separate attachments or copied and pasted into this Word document. Please do not just refer to the assessment plan; the report should serve as a stand-alone document.

Rubric for Assessing Goal #1

Paper # _____ Last Name _____

Goal 1: Forensic Science majors will understand appropriate patterns of Career Planning and Professional Development.

Learning Outcomes:

1. Does the student identify major concepts and their categories of evidence?

Poor		Adequate		Excellent	
1	2	3	4	5	Not applicable to paper's topic

Comments:

2. **Does the student** identify trends in the field of forensic science?

Poor		Adequate		Excellent	
1	2	3	4	5	Not applicable to paper's topic

Comments:

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

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			
	Ric	Mary	Erik	Average
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			
	Ric	Mary	Erik	Average
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			
	Ric	Mary	Erik	Average
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

Rubric for Exit Interviews (2021)

Structured Exit Interview with Graduating Forensic Science Seniors

Focus group questions.

1. What was the most interesting question on the questionnaire?
2. What was/were your favorite courses in the major?
3. What elective courses would you suggest we create?
4. Weakness in the curriculum—What required courses would you suggest we create?
5. Do you have a sense of the breadth of knowledge of this discipline?
6. Were courses with hands-on-experience helpful?
7. Do you think you received helpful guidance from you mentor?

Goal #1: Forensic Science majors will understand appropriate patterns of Career Planning and Professional Development.

Learning Outcomes:

8. Do the students identify major concepts and their categories of evidence?
Here we may prompt them with key/major concepts or ask them to list what they think are the major concepts.
9. Do the students identify major/key trends in the field of forensic science?
10. Do the students identify the scientific and empirical basis of forensic science investigative and analytic methods? What would be an “appropriate” answer to these questions?

11. Other Issues:

a. Facilities? Lab, lab access...?

b. Research Experience? Did you get the appropriate experience? Where did you get that research experience?

c. Security issues?

12. What additional questions should we be asking?

Notes on responses:

Notes from Exit Interviews 2021 – Forensic Science

Favorite courses - in the major range from Crime Scene Investigation, Forensic Chem, Forensic Bio, and Death Investigation. All seemed to enjoy the death investigation course as they were able to meet people in the field and make connections. All students were very much against dropping that class as a major requirement.

New courses - Students were very interested in learning more about the legal side of fore. Science. Want to learn more about testifying and expert witnesses. Would like something that goes from start to finish on the proceedings of a trial related to forensic science. Students also mentioned forensic art as an option for a different course along with forgeries, signatures, and computer forensics. Students were also interested in learning more about how to interview and more about how to find jobs to apply/how to know they exist. Students also mentioned forensic toxicology as a new course option.

Foundations of Forensic Science – All students agreed they got the foundations of forensics in the course work. Some examples were students talking about the death investigation class and how they felt prepared and able to have conversations with practicing forensic scientist about topics they previously learned in forensic classes. They all felt they could hold their own in those conversations and relate those conversations back to their studies. Another example was the students interning at the toxicology lab. It was just assumed that they knew how the instruments worked and the different methods (chain of custody, etc). The students felt comfortable performing these tasks based on their knowledge from their forensic coursework

Assets to Major – Students felt that the hands on experience was the most beneficial portion of their learning. The students specifically mentioned the crime scene practical as the lab/hands on activity that both challenged them the most and was the most beneficial in testing their ability across a wide range of forensic science topics. Mention was to even expand the practical to incorporate more techniques. Students also mentioned that the internship was invaluable and gave them the real world experience. Most all students said to definitely keep the internship as a requirement for the major.

Mentors – Mentioned that they felt connected with the adjuncts in the department as well as their mentors. They felt like they really needed their mentors help in navigating to study abroad and trying to figure out all the semesters to take different labs, etc related to studying abroad. Also felt that mentors (both the formal and informal) were the ones who helped the most in locating graduate schools and jobs in Forensic science. Tied that back in with more emphasis on job markets and where to look for jobs in forensics.

Trends in Forensic Science – Students seemed a bit confused on what exactly this was referring to and had some difficulty explaining where the different fields in forensic science are heading. This may be an opportunity for a seminar type course for juniors/seniors to discuss trends.

Some discussion was had about safety and security on campus. Most students felt safe on campus, but most students did not feel very safe just a block off campus. Several students shared experiences of friends being robbed or carjacked, cars stolen etc within the immediate vicinity of SLU.