Discipline	Course Number	Title
Computer Systems Technology	270	CST 270 06/03/2019-Computer Forensics I
Division	Department	Faculty Preparer
Business and Computer Technologies	Computer Science & Information Technology	James Lewis
Date of Last Filed Assessment Report		

I. Review previous assessment reports submitted for this course and provide the following information.

1. Was this course previously assessed and if so, when?

No

2. Briefly describe the results of previous assessment report(s).

3.

4. Briefly describe the Action Plan/Intended Changes from the previous report(s), when and how changes were implemented.

5.

II. Assessment Results per Student Learning Outcome

Outcome 1: Recognize the concepts and essential techniques used by digital recovery experts.

- Assessment Plan

  - Assessment Tool: Final exam - short answer/multiple choice test.

  - Assessment Date: Fall 2017

  - Course section(s)/other population: All sections once the course runs.

  - Number students to be assessed: All students

  - How the assessment will be scored: Answers will be scored using an answer key.

- o Standard of success to be used for this assessment: 80% of the students must score 75% or higher on the exam.

- o Who will score and analyze the data: Departmental faculty will score and analyze the data.

1. Indicate the Semester(s) and year(s) assessment data were collected for this report.

Fall (indicate years below)	Winter (indicate years below)	SP/SU (indicate years below)
	2019	

2. Provide assessment sample size data in the table below.

# of students enrolled	# of students assessed
17	16

3. If the number of students assessed differs from the number of students enrolled, please explain why all enrolled students were not assessed, e.g. absence, withdrawal, or did not complete activity.

One student stopped attending classes after approximately six weeks into the term.

4. Describe how students from all populations (day students on campus, DL, MM, evening, extension center sites, etc.) were included in the assessment based on your selection criteria.

All attending students from the Winter 2019 were included in this assessment. Thiis course was taught as an evening section F2F.

5. Describe the process used to assess this outcome. Include a brief description of this tool and how it was scored.

A final examination that consisted of concept questions was issued to all attending students. 56% of the students passed the final examination with a score of 75% or higher.

6. Briefly describe assessment results based on data collected for this outcome and tool during the course assessment. Discuss the extent to which students achieved this learning outcome and indicate whether the standard of success was met for this outcome and tool.

Met Standard of Success: No

Although students demonstrated hands-on ability to forensically examine data, the requirements for the written portion of this assessment were not met. A correlation review between subject matter and practical skill will be conducted of

> instructor material and any alignments identified as being necessary will be implemented.
>
> This is the first class where this objective was not met, and it is noted that there were 17 students in this classroom that contained 12 forensic workstations. As a mitigating approach for this, an enrollment cap was placed on this course for a maximum of 12 students. It is anticipated that reducing the number of students per workstation will allow more instructor attention to individual student learning, thus improving the results.

7. Based on your interpretation of the assessment results, describe the areas of strength in student achievement of this learning outcome.

> Strength in student achievement for this learning outcome is demonstrated by student ability in performing actual data analysis and recovery techniques.

8. Based on your analysis of student performance, discuss the areas in which student achievement of this learning outcome could be improved. If student met standard of success, you may wish to identify your plans for continuous improvement.

> Continuous improvement is dependent on instructor material being current and relevant with latest explanation of tools and techniques used in computer forensics.

Outcome 2: Conduct an examination of a computer hard drive for lost, deleted or encrypted data.

- Assessment Plan
    - Assessment Tool: Laboratory report of examination
    - Assessment Date: Fall 2017
    - Course section(s)/other population: All sections
    - Number students to be assessed: All students
    - How the assessment will be scored: Lab report will be scored using a departmentally-developed rubric.
    - Standard of success to be used for this assessment: 80% of the students will score 80% or higher on the lab report.
    - Who will score and analyze the data: Departmental faculty

1. Indicate the Semester(s) and year(s) assessment data were collected for this report.

Fall (indicate years below)	Winter (indicate years below)	SP/SU (indicate years below)
	2019	

2. Provide assessment sample size data in the table below.

# of students enrolled	# of students assessed
17	16

3. If the number of students assessed differs from the number of students enrolled, please explain why all enrolled students were not assessed, e.g. absence, withdrawal, or did not complete activity.

One student stopped attending classes after approximately six weeks into the term.

4. Describe how students from all populations (day students on campus, DL, MM, evening, extension center sites, etc.) were included in the assessment based on your selection criteria.

All attending students from the Winter 2019 were included in this assessment. Thiis course was taught as an evening section F2F.

5. Describe the process used to assess this outcome. Include a brief description of this tool and how it was scored.

Forensic case image files were provided to the students. All students successfully examined each case image file (18 files each). Students had to demonstrate They knew how to analyze the data and collect evidence.

A concept and technique question on the final examination was included for this SLO. 93% (15 of 16) students successfully answered this question.

6. Briefly describe assessment results based on data collected for this outcome and tool during the course assessment. Discuss the extent to which students achieved this learning outcome and indicate whether the standard of success was met for this outcome and tool.

Met Standard of Success: Yes

For the hands-on demonstration of required techniques, 100% of the assessed students were successful in meeting the stated objectives.

7. Based on your interpretation of the assessment results, describe the areas of strength in student achievement of this learning outcome.

Students were 100% successful in performing forensic analysis of all case image files.

8. Based on your analysis of student performance, discuss the areas in which student achievement of this learning outcome could be improved. If student met standard of success, you may wish to identify your plans for continuous improvement.

Continuous improvement in this SLO requires adoption of current software and hardware used in computer forensic examinations.

Outcome 3: Conduct an examination of a computer hard drive for evidence of unauthorized corporate use.

- Assessment Plan

    o Assessment Tool: Laboratory report of examination

    o Assessment Date: Fall 2017

    o Course section(s)/other population: All sections

    o Number students to be assessed: All students

    o How the assessment will be scored: Lab report will be scored using a departmentally-developed rubric.

    o Standard of success to be used for this assessment: 80% of the students will score 80% or higher on the lab report.

    o Who will score and analyze the data: Departmental faculty

1. Indicate the Semester(s) and year(s) assessment data were collected for this report.

Fall (indicate years below)	Winter (indicate years below)	SP/SU (indicate years below)
	2019	

2. Provide assessment sample size data in the table below.

# of students enrolled	# of students assessed
17	16

3. If the number of students assessed differs from the number of students enrolled, please explain why all enrolled students were not assessed, e.g. absence, withdrawal, or did not complete activity.

One student stopped attending classes after approximately six weeks into the term.

4. Describe how students from all populations (day students on campus, DL, MM, evening, extension center sites, etc.) were included in the assessment based on your selection criteria.

> All attending students from the Winter 2019 were included in this assessment. Thiis course was taught as an evening section F2F.

5. Describe the process used to assess this outcome. Include a brief description of this tool and how it was scored.

> Students were provided with multiple forensic case image files for examination. The instructor would attend each station and verify success of each technique.

6. Briefly describe assessment results based on data collected for this outcome and tool during the course assessment. Discuss the extent to which students achieved this learning outcome and indicate whether the standard of success was met for this outcome and tool.

> Met Standard of Success: <u>Yes</u>
>
> Students performed an assessment and explanation to the instructor of each forensic case image file that was examined and analyzed. 100% of the students were able to perform each required forensic examination of data misuse.

7. Based on your interpretation of the assessment results, describe the areas of strength in student achievement of this learning outcome.

> Students are assessed in their ability to examine a recovered image from a computer hard drive. The strength in this area is demonstrated by their 100% ability to perform such techniques.

8. Based on your analysis of student performance, discuss the areas in which student achievement of this learning outcome could be improved. If student met standard of success, you may wish to identify your plans for continuous improvement.

> Future purchase of the latest edition of forensic examination software.

III. Course Summary and Intended Changes Based on Assessment Results

1. Based on the previous report's Intended Change(s) identified in Section I above, please discuss how effective the changes were in improving student learning.

> 2.

3. Describe your overall impression of how this course is meeting the needs of students. Did the assessment process bring to light anything about student achievement of learning outcomes that surprised you?

> The course provides in-depth skills at data analysis and recovery. The lack of correlation between testing tools and direct hands-on skills was not anticipated. Further research into this will be conducted with the next class.

4. Describe when and how this information, including the action plan, was or will be shared with Departmental Faculty.

> This will be shared with faculty that teach this subject for a review and determination of specific actions to be implemented.

5.
Intended Change(s)

Intended Change	Description of the change	Rationale	Implementation Date
Outcome Language	'How the assessment will be scored: Lab report will be scored using a departmentally-developed rubric' will be revised to state 'The assessment will be scored as a pass / fail standard for each case image file examined.'	Too much emphasis on scoring is placed on the written report of each case image file that is examined. This is very time consuming and detracts from the time necessary to teach critical technical skills required to be successful in this profession. Advanced courses will focus on the reporting of forensic examinations.	2020

6. Is there anything that you would like to mention that was not already captured?

This course is offered once per term (Fall and Winter). Time between analysis of assessment results and determination of corrective or alternative actions that will potentially be implemented may require a full term to be effective.

III. Attached Files

CST 270 Data

Faculty/Preparer: James Lewis **Date:** 07/02/2019
Department Chair: Philip Geyer **Date:** 07/03/2019
Dean: Eva Samulski **Date:** 07/07/2019
Assessment Committee Chair: Shawn Deron **Date:** 11/08/2019