

UPAC Assessment Report

Department of Gemology

BS Gemology

Submitted February 2021

Commented [A1]: Please list the programs that are included in this report.

Program Student Learning Outcomes

1. Students will be able to identify a gemstone
2. Students will be able to grade a gem
3. Students will be able to demonstrate knowledge of national and international laws regulating the mining and sale of gems

Curriculum Map

COURSE	SLO 1	SLO 2	SLO 3
GEM 101	I		I
GEM 201		I	R
GEM 301	R		
GEM 401			M
GEM 499	M, A	M, A	A

I: The SLO is introduced to students in this course.

R: The SLO is reinforced in this course

M: The SLO is mastered by students in this course

A: The SLO is assessed in this course

Commented [A2]: UPAC is primarily concerned that each SLO is assessed in at least one course. It is also concerned that each SLO is covered in at least one course: although we assume that if it is assessed it is covered in that class. UPAC does not evaluate the use of labels I, R, M beyond their concern related to SLO coverage. A program may therefore satisfy UPAC expectations by including only "A" labels where appropriate.

Also, if an SLO is only assessed in a non-required course, UPAC expects to see a justification that the assessment is providing an accurate measure of the program.

Assessment 1: Identify 10 Gems

Student Learning Outcome Assessed

SLO1: Students will be able to identify a gemstone

Task

Each student in GEM 499 was given 10 gemstones and asked to identify them.

Rubric

Each student was classified as either exceptional, proficient, satisfactory, or underdeveloped. The classification criteria are given below.

- Exceptional: All 10 gemstones were correctly identified.
- Proficient: Either 8 or 9 of the gemstones were correctly identified.
- Satisfactory: Either 5, 6, or 7 of the gemstones were correctly identified.
- Underdeveloped: Less than 5 of the gemstones were correctly identified.

Benchmark

At least 85% of students are classified as at least satisfactory.

Delivery

The task was part of a mid-term exam administered to all students in GEM 499 during the Fall 2022 and Fall 2023 semesters. The same 10 gems were used for this assessment as they were available for inspection on a central lab table. Only one section of GEM 499 was offered and the delivery was identical for all students.

Results

Students received the following classifications

Classification	Fall 2022	Fall 2023
Exceptional	5/29	4/26
Proficient	9/29	6/26
Satisfactory	12/29	12/26
Underdeveloped	3/29	4/26

The aggregate rate of successful identification is given below.

Gem	Fall 2022	Fall 2023
amber	26/29	24/26
beryl	12/29	14/26
chalcedony	22/29	16/26
coral	15/29	18/26
emerald	18/29	14/26
hessonite	16/29	16/26

Commented [A3]: Please precede each assessment with a page break and label the assessment so that UPAC can reference them in internal discussion and documentation.

Commented [A4]: UPAC understands that rubrics will vary greatly depending on discipline. UPACs main concern is that the rubric specifies how a student is classified and that the classifications do not overlap.

Commented [A5]: UPAC understands that benchmark levels will vary greatly across disciplines and may range from the 100% competencies of the health professions to much lower values for students in an introductory modern language class. UPAC does not expect to make judgements about whether a particular benchmark is too high or too low (although may do so if a benchmark seems extreme).

Commented [A6]: UPACs primary concern related to delivery is validity. If, for example, the task is given as an optional and ungraded assignment by one instructor while another instructor in the same semester assigns the task as a graded homework assignment, the results cannot be aggregated.

Commented [A7]: UPAC expects to see the results of applying the provided rubric to each student being assessed. Any additional data that the program used in their analysis should also be included. In this example, the breakdown by gem-type is not necessarily part of the rubric or benchmark but provides valuable additional insight into student learning. Since this data is referenced in the programmatic analysis, it needs to be reported.

lapis lazuli	28/29	26/26
moonstone	5/29	15/26
pearl	29/29	25/26
ruby	18/29	15/26

Analysis

The benchmark was met in both semesters as 90% and 92% of students were classified as at least proficient. Students in the Fall 2022 course demonstrated less success in identifying moonstones than any other type. This result demonstrated the need to devote more attention to the distinct properties of moonstone that relate to correct identification.

Actions Taken

In the Fall of 2023, more attention was given in classroom lecture to the distinct properties of moonstone that relate to correct identification. The aggregate rate of success improved significantly; moving from 5/29 in the Fall of 2022 to 15/26 in the Fall 2023.

Commented [A8]: UPAC is concerned that the analysis is directly connected to the supplied data. Please provide a clear connection between the data collected and the analysis provided.

Commented [A9]: This section will describe those actions that were taken as a result of previous collected data. Please be clear on how the data supports the actions taken.

Assessment 2: Bureau of Land Management Mining Law

Student Learning Outcome Assessed

Students will be able to demonstrate knowledge of national and international laws regulating the mining and sale of gems

Task

Each student in GEM 499 was asked to describe the changes made in 1955 to the U.S. Bureau of Land Management Mining Law.

Rubric

Each student was classified as either exceptional, proficient, satisfactory, or underdeveloped. The classification criteria are given below.

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Benchmark

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Delivery

The task was part of the final exam administered to all students in GEM 499 during the Fall 2023. There were two sections of GEM 499 taught by two different instructors that semester. Each instructor agreed that this task would account for exactly 10% of their final exam and that both instructor's final exam would account for 30% of their overall course grade.

Results

Students received the following classifications

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The aggregate rate of successful identification is given below.

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Analysis

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Actions Taken

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