**Student Outcome Observation Report for Term 24-2**

**items 1-4 can be completed prior to the assessment event**

1. **Outcome Details.**
   * 1. Outcome: Student Outcome 3 – Formulate or design a system, process, procedure, or program to meet desired needs.
     2. Performance Indicators:
        + Define clear requirements to a problem.
2. **Observation Details.** 
   * 1. Course Directors’ name: COL Nick Clark
     2. Number of Applied Statistics and Data Science majors assessed, by graduating class:

Class of 2024: 10

Class of 2025: 3

* + 1. Course: MA478 – Generalized Linear Models
    2. Name of observed event(s)*:* Term End Exam
    3. Was this an individual or team event? Individual
    4. Description of observed event.

The term end exam (final) was a data analysis project where the students were given a dataset and asked to produce (in 3.5 hours) a summarized report using at least 3 different statistical models to address a given research question. The students were also given a ‘kaggle’ style scoreboard so they could examine the predictive performance of their model compared to their classmates, but this was, in a lot of ways, a red herring as the project (as was explicitly told to the students) was to build explainable models.

* + 1. Data evaluated and how it was gathered:

Students submitted a report that was to be no longer than 3 pages. Here we evaluated whether students were able to figure out that the problem was truly an inferential problem and not a predictive problem.

1. **Rubric.**

The students were given an assessment as to whether they clearly defined that the problem was inferential instead of predictive. Partial success was given if students did not clearly state that the problem as inferential but built models that were interpretable.

**All scores were converted to a percentage for evaluations below**.

* 1. Green: Met standard
  2. Amber: Met standard with concerns
  3. Red: Failed to meet standard

1. **Pre-observation identification of the overall Acceptable standard.** At least 80% must meet the standard (score of 1 or 2).

**must be completed after gathering the assessment data**

1. **Course Directors’ Assessment.** 
   * 1. Overall assessment. Based on the overall ***Acceptable*** standard specified in item 4 above, the overall performance of ASDS majors on this observed event was: *(Circle one:)*

* *Green: Acceptable performance*
* *Amber: Acceptable performance, but weak performance or weak evaluation event/conditions for the SO*
* *Red: Unacceptable performance, note when Unacceptable performance, but weak evaluation event/conditions for the SO Unacceptable performance*
  + 1. Justification for overall assessment.

Score Total %

Acceptable 3 23%

Partial 6 38.5%

Unaccept 4 23%

* + 1. If the overall assessment is Unacceptable or weak, give your best educated guess as to why this performance occurred.

This was, admittedly, a tricky assessment as on the surface it appeared that the problem was a predictive problem, but if the students clearly defined the requirements they would have seen that it was an inferential problem.

* + 1. If the overall assessment is Exceptional or otherwise strong, give your best educated guess as to what we are (or the Academy is) doing to develop the knowledge, skills, and/or behaviors demonstrated by the students.

N/A

* + 1. Notable observations. Include any other strengths, weaknesses, or trends discovered when observing student work.

N/A

* + 1. Recommendations for improvement.

This may be too difficult a task at this stage for the students. In the future we should explicitly ask them to explain whether the problem is inferential or predictive (or something in between). Alternatively, the students should get a few more practice problems on this topic. Though it was discussed, and was a main theme for the course, it did not get assessed very often prior to the exam.

* + 1. Data summary and archive. Attach a summary of individual performance and if feasible archive with the OMT the actual data. Explicitly state here the location of the archived data.

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| |  |  | | --- | --- | | Asuncion | U | | Blackmon | U | | Chrisman | P | | Hild | A | | Hyatt | A | | Kim | P | | Klein | U | | Palchak | U | | Parcell | P | | Rohan | A | | Villanti | P | | Watson | P | | Wong | P | |  |

Archived data are stored in the archived AY 25-1 MA478 course folder on the D/Math SharePoint under Graded Events -> Report Feedback