

Q-core Assessment Report

Course: **STAT 217: Intermediate Statistics**

Semester: Spring 2013

Instructor(s) and/or supervisor: Instructors: Mark Greenwood, Alyssa Peck, Joe Manlove, Erica Swanson. Course Supervisor: Mark Greenwood

Assessment done by (2 faculty members): Mark Greenwood and Megan Higgs

Number of students in course: 120

Number of students assessed (at least 6): For each of the four sections, 3 projects were randomly selected. 13 projects were assessed (two randomly selected students had worked together (which was allowed), so another project was randomly selected)

Description of assignment, problems, and/or questions used for assessment:

Students were required to assess useful variables, fit an initial multiple linear regression model, remove unimportant variables, compare a suite of different models, check diagnostics for one model, and discuss the general usefulness of the model. The students ran statistical software R to get their results and then wrote a report containing their results. This was the 5th such project in the semester.

Learning Outcome 1: *Interpret and draw inferences from mathematical or statistical models represented as formulas, graphs, or tables.*

- Total number of assignments assessed: 13
- Number of assignments demonstrating the learning outcome at an acceptable level, as defined in the Q-core Rationale and Assessment Plan : 12
- Proportion of assignments rated as “acceptable”: 0.92
- Is this over the specified threshold of 2/3? Yes
- Comments and ideas for better aligning the course or the assignments with the Q-core rationale:

The students were generally able to use correlation information to select variables that were useful for predicting the response variable, so there are no suggestions on this component.

- Comments and ideas for improving the process of assessment:

In future assessment with large(r) multi-section courses, it is recommended that “signature” questions on an exam be devised that directly relate to the learning outcomes. Using

projects involves quite a bit of inherent variability in the ways students may or may not be meeting the outcomes and more time to complete the assessment.

Learning Outcome 2: *Represent mathematical or statistical information numerically and visually.*

- Total number of assignments assessed: 13
- Number of assignments demonstrating the learning outcome at an acceptable level, as defined in the Q-core Rationale and Assessment Plan : 13
- Proportion of assignments rated as “acceptable”: 1.0
- Is this over the specified threshold of 2/3? Yes
- Comments and ideas for better aligning the course or the assignments with the Q-core rationale:

The students were very capable at getting the required results from the statistical software and including them appropriately in the report.

- Comments and ideas for improving the process of assessment:

None

Learning Outcome 3: *Employ quantitative methods such as arithmetic, algebra, geometry, or statistical inference to solve problems.*

- Total number of assignments assessed: 13
- Number of assignments demonstrating the learning outcome at an acceptable level, as defined in the Q-core Rationale and Assessment Plan : 10
- Proportion of assignments rated as “acceptable”: 0.77
- Is this over the specified threshold of 2/3? Yes
- Comments and ideas for better aligning the course or the assignments with the Q-core rationale:

Students struggled to correctly interpret some concepts and additional focus on the interpretation of (instead of mechanics of) the methods will be considered for future semesters, especially for newer instructors in the course. The evaluation process has provided information on the need to focus on increasing the communication between instructors in the course.

- Comments and ideas for improving the process of assessment: none