Q-core Assessment Report

<u>Course</u>: PHL 236 Q Introduction to Logic

<u>Semester</u>: Spring 2013

<u>Instructor(s) and/or supervisor</u>: Waller

<u>Assessment done by (2 faculty members)</u>: Waller and Levy

<u>Number of students in course:</u> 75

<u>Number of students assessed (at least 6):</u> 12

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

<u>Final exam questions – 3 questions asking students to represent and assess arguments using Venn, Modified Euler, or Carroll Diagrams were used in this assessment</u>

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

- <u>Total number of assignments assessed</u>: 12

- <u>Number of assignments demonstrating the learning outcome at an acceptable level, as defined in the *Q-core Rationale and Assessment Plan* :</u> 10

- <u>Proportion of assignments rated as "acceptable": 83%</u>

- <u>Is this over the specified threshold of 2/3? yes</u>

- <u>Comments and ideas for better aligning the course or the assignments with the Q-core rationale:</u>

The two sections of the course, fall and spring, probably need to be synchronized a bit more than they are currently.

That said, the diagrams are a good method for assessing all 3 learning outcomes. These diagrams ask students to draw inferences about the validity or invalidity of an argument based on a diagram they construct to portray the relationships between sets.

- <u>Comments and ideas for improving the process of assessment:</u>

This seems to be working well as it is.

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

- Total number of assignments assessed: 12

- 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": 83%

- 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 diagrams ask students to represent mathematical information about sets and members of sets visually.

- Comments and ideas for improving the process of assessment:

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

- Total number of assignments assessed: 12

- 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": 83%

- 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:

In PHL 236, students solve problems using diagrams and do proofs similar to those in geometry.

- Comments and ideas for improving the process of assessment:

Next year I think this course could use proofs done in quantificational/predicate logic to assess students' abilities to employ quantitative methods to solve problems. If the Q assessment team thinks that quantificational proofs are a more appropriate measure of the third outcome, we are happy to go back and review the final exams for student success on quantificational proofs.