To: Lori Simons, PhD

From: Nancy Blank, PhD

Date: January 29, 2015

Per your request please find attached a quantitative reasoning summary from the fall of 2013 to the spring of 2014. A draft of the QR rubric is attached as well.

The following activities were completed during the academic year of 2013-2014. We examined the QR approval process, the number of classes that have been approved as QR classes, and whether the needs of A&S students were being met through these offerings. Although there is a systematic process for QR approval, we questioned whether the criteria captured what is meant by Quantitative Literacy in each division. Further, we found that there are 14 classes that are designated QR and that most of these serve the needs of specific majors (9/14). The most underserved group appears to be Humanities and Anthropology majors who have limited choices to fulfill both the QR and Math requirements. We discussed four potential options: 1) permit a math class that is designated QR to fulfill both the Math and QR requirements for Humanities and Anthropology majors, 2) develop more classes to meet the QR requirement, 3) reconsider the criteria for QR designation, and 4) eliminate the QR designation. Representatives went back to their respective units for feedback. Ultimately, the Science Division proposed the development of additional QR classes targeted for non-science majors. We voted to check on the status of this goal after the addition of new QR classes next spring (2015). We care continuing to assess the four options above.

In the Spring of 2014, we focused on drafting a potential rubric to be used in the assessment of QR classes across the College (see attachment). We distributed a draft of this rubric and invited Faculty who were teaching a QR designated class to pilot its use.

Three QR classes were assessed: one class from the social sciences, sciences and political science. We found that there was no consistent method of assessment. In summary, preliminary results indicated that students performed relatively well on solving mathematical problems but performed poorly on the interpretation.  Based on this feedback, the committee began to revise the rubric by first: 1) revising criteria and 2) developing indicators for exemplary and unsatisfactory performance.

Attachment:A&S Goal: a liberally educated person uses quantitative methods effectively. a) Students will be able to use mathematical methods to solve problems; b) Students will be able to interpret, make inferences and draw conclusions from data; c) Students will be able to determine if numerical results are reasonable. (2-18-2014)

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| **Criteria**  **Level** | **3**  **Exemplary** | **2**  **Competent** | **1**  **Beginner** | **0**  **Unsatisfactory** |
| ***Solves problems using mathematical methods.*** | Student is able to identify mathematical method, use method correctly, and produce correct result. |  |  | Shows no understanding in the use of mathematical methods to solve problems in the discipline. |
| ***Solves problems using data in graphic or tabular form*** | Student is able to identify the appropriate graph/ table and is able to construct it on his/her own. |  |  | Shows no understanding of data in graphic or tabular form |
| ***Interprets data and draws conclusions*** | Student is able to integrate results with content and draw conclusions from the data. |  |  | Unable to interpret the data. |
| ***Determines whether numerical results are reasonable.*** | Student is able to identify untenable patterns that are not obvious. |  |  | Unable to determine whether numerical results are reasonable. |