Proposed Quantitative Reasoning (QR) Assessment Plan

Activity	Explanation/Rationale
Refine Institutional Learning Outcome (ILO), GE Learning Outcomes, and certification criteria. (proposal on reverse) Oct.-Nov. 2014	The current QR GE learning outcome (LO) allows for a "plug and chug" approach without significant reflection or application. Since this reflects community college standards, likely will not meet WASC full expectations for core competencies (of which Quantitative reasoning is one), and seems inconsistent with a liberal arts approach to QR we will solicit faculty feedback and propose revisions to the current GE LO, ILO, and certification criteria (see reverse).
Seek to add upper-division QR exposure to Westmont's GE and solicit more QR courses across majors. Dec. 2014 - Feb. 2015	The current GE requirement for a single and possibly lower-division QR course will likely not meet WASC full expectations for competencies, which involve repeated and higher-level exposure to competency-related material. Since our current offerings are lean and lower-division we will solicit addition QR courses at different levels and across majors, particularly in the NBS and Social Sciences.
Implement the Bowdoin QR Assessment test Aug. 2015 – Dec. 2015	The Bowdoin College QR assessment test is a NSF-sponsored free normed test that our students can take online. Thus it provides an opportunity for convenient ongoing and low-cost assessment of QR competency without sacrificing class time. We will seek to test all incoming Freshmen online and again at the close of each Fall 2015 QR course.
QR faculty reflect on Results, Solicit Full Faculty Input, Produce Report, Make Recommendations Jan– April 2016	The QR course results will be compared with incoming students' results with the goal of ascertaining our courses' QR-learning effectiveness. Results will be disseminated to individual instructors and a small "QR assessment team" will review the results, make recommendations, and assist in the preparation of a report on Westmont QR literacy. A special goal will be to determine whether to (a) change the existing QR requirements and (b) determine whether to use the Bowdoin QR assessment tests on an ongoing basis.

Proposed Revisions to the
Quantitative and Analytical Reasoning GE LO and Certification Criteria

Current Language:

Certification Criteria

Students will be able to
1. make use of mathematical models for physical or social systems

-AND/OR-

compute and interpret numeric data, summative statistics and/or graphical representations.

2. reflect on the strengths and weaknesses of particular quantitative models or methods as tools in the natural and social sciences

Student Learning Outcome (assessed as part of Quantitative Literacy ILO; provisionally approved by the faculty meeting 04/15/2011)

Students will apply relevant scientific, mathematical and logical methods to analyze and solve problems effectively.

Proposed Revisions with additions bolded and italicized:

Certification Criteria

Students will be able to
1. make use of mathematical *(including statistical)* models for physical or social systems

-AND/OR-

compute and interpret numeric data, summative statistics and/or graphical representations.

2. reflect on the strengths and weaknesses of particular quantitative models or methods as tools in the natural and social sciences

3. ***Be able to interpret, reflect on, and use quantitative models and data in public, vocational, and/or private decision making.***

Student Learning Outcome ~~(assessed as part of Quantitative Literacy ILO; provisionally approved by the faculty meeting 04/15/2011)~~

Students will apply relevant scientific, mathematical and logical methods to analyze and solve problems effectively *and be able to utilize the results when making public, vocational, and private decisions.*

Rationale:
The proposed revisions close a loophole in the current criteria which technically allows for what is considered to be only a community college level QR exposure in that they do not explicitly require students to reflect on quantitative data or apply it to decision-oriented problem solving applications..