Requirements for Academic Skill Development Courses: Quantitative Reasoning Courses (Q)

OBJECTIVES FOR QUANTITATIVE REASONING ("Q") COURSES
Quantitative Literacy is "not so much about understanding abstract concepts as about applying elementary tools in sophisticated settings" (Steen, 2001)

A course in any field is eligible to be designated as a Q course if, in addition to its other goals, it also meets the following objectives:

I. Q courses teach the application of basic mathematical skills, techniques, and problem-solving approaches to interesting problems (some of which may have practical or "real world" applications). These basic mathematical skills may include, but are not limited to:

- Arithmetic and applications (fractions, decimals, ratios, percents, percentage change, interest, weighted averages)
- Basic algebra (equations with one variable, equations relating two variables)
- Basic geometry (length, area, volume, angles)
- Interpretation of graphs and tables
- Formulae (evaluation of formulae, conversion of units)
- Basic statistics (histograms, central tendency, measures of variability)
- Basic probability
- Logical thinking and mathematical reasoning

II. Q courses will also provide two or more assignments to evaluate student proficiency in applying the appropriate mathematical concepts and techniques and communicating the results. Assignments for evaluation can include, but are not limited to:

- Projects that involve students' use of quantitative skills and then appropriately communicating their results.
- Tests that contain questions asking students to use quantitative skills in an applied fashion and then appropriately communicating their results.
- Problem sets that contain questions asking students to use quantitative skills in an applied fashion and then appropriately communicating their results.

III. Q courses must provide instruction in the application of basic mathematical skills, concepts and techniques to solve problems. To accomplish this, some instruction and or review of basic mathematical skills and concepts may be necessary; however, this is not a required facet of a Q course.