Date: April 11th, 2012

From: Ron Bontekoe, Chair
       Committee on Research and Graduate Education

To: Senate Executive Committee

Re: Proposed Change in Required High School Level Coursework for Applicants to UHM

As you’re aware, the General Education Committee, in light of WASC’s accreditation standards requiring that all baccalaureate programs involve (some) instruction in “college-level quantitative skills,” recently proposed a change to the FS Hallmarks—a change that would have required any course receiving an FS designation at UH to contain a substantial mathematical component. The Multi-Campus FS Workgroup that was set up to examine this proposal concluded that it was ill-advised, and recommended instead that a minor change be introduced into the wording of the FS Hallmarks in order to clarify which courses could, and could not, be designated as satisfying the FS core requirement. The compromise agreed upon by the FS Workgroup specified that acceptable FS courses would have to contain both a focus on proofs (as opposed to mere computation) and also a significant component dedicated to the cultivation of “computational and/or quantitative skills.” This choice of wording ensured that PHIL 110, a course which has for decades satisfied the FS requirement (and its precursor), would continue to do so. This relieved concerns on the part of philosophy professors at the community colleges, who rely heavily on PHIL 110 to maintain their departments’ enrollment figures. However, it left many mathematics professors—both at UHM and the community colleges—dissatisfied with the fact that no remedy was being offered for poor mathematical skills on the part of many undergraduates.

There is much evidence that many undergraduates now at Manoa could not possibly expect to pass a course that seriously demanded of them “college-level quantitative skills.” Nor is this surprising, given that high school applicants wishing to enter UHM are currently required to have completed only two years worth of high school mathematics. One cannot expect to perform adequately in a genuinely university-level course in algebra, calculus, or statistics, say, if the last exposure to mathematics one has received was a grade ten course completed three years earlier. (Many undergraduates at Manoa have difficulty even adding, multiplying or dividing fractions.) For this reason, CoRGE wishes to propose that applicants to UHM undergraduate programs be expected to have completed the equivalent of four years worth of high school mathematics. We would appreciate the Senate Executive Committee’s passing on this recommendation to the appropriate standing committees (presumably CAPP and GEC) for them to consider as part of their work assignment in the coming academic year.
The reason CoRGE feels that it has some standing on this issue is because of our committee’s responsibility for research. In recent years there has been a growing emphasis at UHM on the importance of research as a component even of undergraduate education. While it might be argued that successful performance in many undergraduate programs (Art, Music, Theatre and Dance, foreign languages, etc.) does not depend on any significant competence in mathematics, it seems to us that an undergraduate education is a time for exploration even more so than specialization. It is far from ideal to have undergraduates arriving at Manoa who, by virtue of their inadequate background preparation, are shut off from the possibility of discovering and following academic interests, wherever they may lead.