

Math PAC Report for June 1, 2010

At its initial meeting on April 30, 2010, members of the Math PAC developed a strategy to determine competencies needed in the first two years of a math bachelor degree. The strategy is to approach the task in three steps.

Step 1: The first step is to determine competencies included in calculus courses usually titled Calculus I, II and III. At the meeting of April 30, a committee member offered to provide a list of competencies covered in calculus courses at her college. The committee decided to use this list as a base for discussion. The list was posted to the D2L web site approximately one week after April 30, and members have been discussing and refining the list. It was the committee's goal to complete this process by June 1. Due to lack of full committee participation, this goal has not been accomplished.

Step 2: The second step in the process is to determine competencies for freshman and sophomore math courses other than calculus. A list may include those competencies taught in courses such as Differential Equations, Linear Algebra and Discrete Math. The goal was to determine these topics for discussion by June 1 and to decide on the competencies by July 1. Because of the difficulty in completing the first step, the second will need to be accomplished at a later date. There has been some discussion on these topics but no final resolution in reference to what to include.

Step 3: The third step is to determine non-math competencies, possibly included in general education requirements, that are essential to the first two years of a math student's study. These competencies may include topics in computer science and physics. The goal is to complete this step by August 1.

The committee resolved to consult mathematics professional associations, the American Mathematical Society and the Mathematical Association of America, to assist in the development of needed competencies in the first two years of study.

General goals are to create a draft report by August 1 and a final report by August 30.

Two related discussion topics were addressed at the April 30 meeting: 1. how to post to the university transcript the competencies attained by the community college graduate, and 2. determination of an appropriate associate degree at each community/junior college for the intended math major. An example of how to post competencies was provided in the case of an early childhood education agreement between Luzerne CCC and Bloomsburg. With topic 2, it was clarified that community/junior colleges need to provide an avenue to an associate degree for intended math majors, but the institutions do not have to offer a specific associate degree in math.