The New York City Council Committee on Higher Education
Hearing On Pathways
February 25, 2014

Thank you for this opportunity to express my views on the impact of Pathways.

My name is Jonathan Natov and I am a Professor of Mathematics at New York City College of Technology, City University of New York. I am the coordinator of our Bachelor of Science Degree program in applied mathematics.

The applied mathematics program at City Tech was designed to be practical. With extensive input from our industry advisory board, we put together a professionally oriented program. A key feature was the areas of concentration, which allowed students to study mathematical applications in depth. In 2007, our external evaluator praised our program as being an "exemplar" of the mission of City Tech.

Under Pathways, however, we face the challenge of having diluted degree requirements. Essentially the problem is that bachelor of science degrees can no longer specify courses in the common core. The result is that specified upper level courses are replaced by lower level unspecified courses. Pathways is a common core of liberal arts courses guaranteed to transfer within CUNY, but it takes away the right of faculty to select appropriate courses for a given major. The result is that students are using up their financial aid on lower level courses and are not adequately prepared to reach the upper level ones. Ultimately this may hurt graduates seeking employment in a highly competitive workplace.

For example, to progress to upper level engineering courses students need to take physics. Under Pathways, we must accept any science. To ensure students take physics, and keep our degree requirements to a strict 120 credit limit, we must now make room for physics by cutting other courses. Unfortunately, the cut courses have to be upper level. Clearly, we cannot cut the lower level engineering courses, as they are prerequisites for upper level courses.

Our hope is that students interested in applied mathematics make good choices so as to allow them access to upper level coursework, but we cannot guarantee it. Before Pathways, calculus was the minimal contributory math course and that is appropriate for applied mathematics. Under Pathways, the first contributory course is likely to be a lower level college algebra course.

Surely the intention was not to lower the standards of a Bachelor of Science degree, but that is the result.

Thank you for your consideration,

Professor Jonathan Natov
Coordinator, Applied Mathematics
NYC College of Technology
300 Jay Street, Brooklyn NY 11201