New Program Proposal: Master of Science in Computational Finance

Executive Summary

The proposed MS program in Computational Finance (CF) is a collaborative effort of two RIT colleges: the Saunders College of Business (SCB) and the College of Science (COS). It is designed for students who are interested in careers related to computational or quantitative finance. These are careers in financial institutions and corporations involving modeling and data analysis. Typical job titles are: Risk Analyst, Research Associate, Quantitative Analyst, Quantitative Structured Credit Analyst, Credit Risk Analyst, Quantitative Investment Analyst, Quantitative Strategist, Data Analyst, Senior Data Analyst, Fixed Income Quantitative Analyst, Financial Engineer, etc. Research has demonstrated high market demand for these positions. Job websites such as www.careerbuilder.com as well as www.linkedin.com list hundreds of job opportunities in computational finance. These jobs specifically call for knowledge of mathematical and statistical tools such as the ones that will be taught in the proposed program. The RIT program being proposed contains extensive coursework in various aspects of finance as well as in mathematical financial analysis and data analysis.

The proposed program consists of

- 15 credit hours (5 courses) of finance;
- 6 credit hours (2 courses) of data analytics;
- 6 credit hours (2 courses) of mathematics with financial applications;
- 3 credit hours (1 course) of computational finance experience;
- 6 credit hours (2 courses) of electives for which students can choose from a cross-college pool of relevant courses.

The RIT CF program offers integration of finance, mathematics, and computing. Key elements of the program take advantage of multidisciplinary elements. In addition to required courses from the two colleges proposing the CF program, a wide variety of courses, from the two proposing colleges as well as other RIT colleges are available as electives. The multidisciplinary nature of the program and the involvement of as many as four RIT colleges is its strengths.

The proposed MS program in Computational Finance (CF) is aligned with RIT’s mission. Specifically it allows pursuit of an emerging career. Also, it motivates students through collaborative and multidisciplinary experiences. The program also allows RIT to be associated with elite institutions offering programs in this space and help build RIT’s brand.

The intended launch is for Fall 2015.