

APPENDIX J

Request for Authorization to Establish a Master of Science in Financial Mathematics Degree at North Carolina State University

Introduction

North Carolina State University notified the UNC Office of the President of its intent to plan a Master of Science degree in Financial Mathematics (CIP# 30.9999) on January 15, 2002. The university requests authorization to establish the program in November, 2002.

Program Description

The goal of the proposed program is to graduate trained professionals ready for the workplace in the area of quantitative finance. The students will be expected to understand the rules of various markets such as: equity, fixed income, commodities, and energy markets. They will learn how to model these markets and how to calibrate the models. They will also learn how to compute with these models and answer practical questions such as pricing and hedging financial instruments and estimating their associated risks. The curriculum will draw on resources in the departments of Mathematics, Industrial Engineering, Statistics, Economics, and Agricultural and Resource Economics. The program will be multidisciplinary with a program director appointed by the Dean of the Graduate School.

Program Need

The recent growth in financial markets as well as the rapid development of knowledge in quantitative approaches to finance has led to the demand for technically trained professionals. Job opportunities exist for individuals with an understanding of how to value financial derivatives and complex investments and assess associated risks. Employers hiring such individuals include banks, investment firms, financial trading companies, insurance companies, power companies, natural resource-based firms, agribusiness, and government regulatory institutions. NCSU currently has many courses useful in training quantitatively oriented financial analysts, but they are scattered through many degree programs. It is anticipated that 40 full-time students will be enrolled by the fourth year of the program.

Resources

Courses and faculty are already in place to offer this multidisciplinary program. Some reallocation of present institutional resources and anticipated enrollment increase funds will be adequate to fund the program, and no other new state resources are needed.

Recommendation

It is recommended that the Board of Governors approve the request to establish a Master of Science in Financial Mathematics degree at North Carolina State University effective November 2002.