PROPOSAL FOR AN AREA OF EMPHASIS

Date: April 19, 2021

School/College: Franklin College of Arts and Sciences

Department/Division: Mathematics

Program (Major and Degree): Mathematics - B.S.

Which campus(es) will offer this program? Athens

Proposed Effective Date: August 1, 2021

1. Area of Emphasis Title: Financial Mathematics

2. Area of Emphasis Description:
   A minimum grade of “C” in each of the following:
   (a) MATH 3000-Introduction to Linear Algebra OR MATH 3300-Applied Linear Algebra
   (b) MATH 3100-Sequences and Series
   (c) MATH 3200-Introduction to Higher Mathematics
   (d) FINA 3001-Financial Management
   (e) FINA 4310-Survey of Investments
   (f) MATH 4500/6500-Numerical Analysis
   (g) MATH 4600/6600-Probability
   (h) MATH 4790/6790-The Mathematics of Option Pricing.
   (i) one additional three- or four-credit MATH course numbered 3000 or above, subject to the advisor’s approval, not including any 5000/7000-level courses other than MATH 5200/7200 or MATH 5210/7210.

   Students who receive a “C” or higher in both MATH 3500 and MATH 3510 are exempt from requirements (a) and (c) above.

3. Major Requirements:
   The current major requirements from the Bulletin are pasted below. This area of emphasis would represent a third alternative pathway, supplementing the current ones in General Mathematics and Applied Mathematics.

   **Required Courses** (24 hours)
   (A minimum grade of "C" (2.0) or better must be earned in any upper-division MATH course.)

   Students may choose to complete the General Mathematics Requirements or an Area of Emphasis in Applied Mathematics below. A course taken as an Area of Emphasis requirement cannot be used to satisfy an elective category.

   General Mathematics (24 hours)

   **MATH 4000/6000**

   Choose one of the following:
   **MATH 4100/6100**
MATH 4150/6150
MATH 4250/6250

Six additional three-hour MATH courses at the 3000-level or above, not including MATH 3220, subject to the advisor's approval. A major program may include no more than two courses among MATH 4760/6760, MATH(BINF) 4780/6780, MATH 4790/6790, MATH 4850/6850, MATH 4900/6900, MATH 4950 and may include only MATH 5200/7200 and MATH 5210/7210 at the 5000-level.

Area of Emphasis in Applied Mathematics (24 hours)
MATH 3100
MATH 4500/6500

Choose two of the following:
MATH 4600/6600 or STAT 4510/6510
MATH 4700/6700
MATH 4720/6720

Four additional three-hour MATH courses at the 3000-level or above, not including MATH 3220, subject to the advisor's approval. A major program may include no more than two courses among MATH 4760/6760, MATH(BINF) 4780/6780, MATH 4790/6790, MATH 4850/6850, MATH 4900/6900, MATH 4950, and may include only MATH 5200/7200 and MATH 5210/7210 at the 5000-level.

4. Approvals:

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William Graham                     Alan T. Dorsey                  Dean of Graduate School
Department Head                    Dean, Franklin College          