

Academic Programs Committee Resolution

Re: Proposal by the Fuqua School of Business for a Master of Quantitative Management (MQM)

I. Introduction

- a. This resolution concerns a proposal from Fuqua seeking approval for a Master of Quantitative Management (MQM). This would be a new 54-credit program that would target very recent college graduates with an educational background in business, economics, math, engineer, or science. The aim of the program is to train and credential a class of analysts who can translate and use data analytics in the context of a sophisticated business environment. The expectation is that students at the end of the 10 months-long program will have developed an expertise in one of the four tracks or concentrations offered by the MQM—finance, marketing, business analytics, and forensics—as well complementary knowledge of the uses and limitations of the science of data analytics. Fuqua would like to start the program in July 2017 and anticipates an entering class between 40-60 students. The proposal seems to be pedagogically sound and reflects a strong academic program of study.
- b. The APC discussion took place on February 24, 2016. The documents reviewed by APC included the MQM proposal; the Master’s Advisory Council Discussion Notes; Fuqua’s response to MAC; and letters of support from Fuqua’s Dean, the Chair of Economics, and the Director of SSRI.
- c. The Committee raised a number of questions about the MQM. In increasing order of concern, the questions of the committee fell into three categories: demand, resources, and synergy.
 - a. **Demand.** The Committee was initially concerned that the proposal could be more convincing on the student and market demand for this credential. The proposal makes a strong case that data analytics generally is an area of need. It was not clear from the proposal that either students are clamoring for this credential, the MQM, or that it would be valued the market. The proposal lists a number of impressive companies that might be interested in hiring from the MQM program but did not provide much information on whether these companies currently hire from the programs that award a master’s degree in business analytics or whether these current programs not meeting current demand. However, at the APC meeting, Jennifer Francis, the Senior Associate Dean for Programs and Douglas and Josie Breeden Professor at Fuqua, persuasively argued that there is a strong demand for this program and that Fuqua would have no problems placing students from the MQM with desired placements in industry. The Committee is reassured on this front.
 - b. **Number of tracks.** In many respects because of the four track model, the MQM is like starting up four masters’ programs at once. The Committee raised questions about the selection of the particular tracks and the distribution of faculty expertise. But Senior Associate Dean Breeden ably answered all questions. She informed the Committee that the tracks were chosen with input from all of the relevant stakeholders and reflects market-demand.

- c. **Degree differentiation and synergy.** Most of the Committee's discussion focused on whether the MQM is sufficiently different from the MSQF (Economics), Master in Engineering Management (Pratt) and the MDS under development from SSRI and the Initiative for Information at Duke. The Committee wondered how Duke should address this incipient proliferation of degrees in data science and whether there ought to be greater collaboration among the schools/institutes. Senior Associate Dean Francis was convincing that the MQM is a different academic program from the MSQF and the MDS. Moreover, she noted that she consulted with the heads of the other programs to understand their offerings and potential areas of overlap. Though she admitted the possibility of some overlap among the programs, she explained that the MQM is an applied degree aimed at business professionals who will be working in a business environment. By contrast, the MSQF and the MDS are much more theoretical and technical. She noted that there was very little course overlap between the MQM and the MSQF and there is not likely to be much overlap between the MQM and the MDS. The Committee also discussed a possible tension between the MQM and the Master of Engineering Management (MEM) offered by Pratt. The discussion centered on whether the MQM and the MEM would compete for both students and faculty resources as the MEM rely on Fuqua faculty to teach MEM students. Fuqua notes that MEM does not focus on data analytics and does not focus on the use of data science in business settings. The MQM is thought to be responsive to a particular setting in a very particular environment, which is to train a class of people who can serve as a go-between data science theorists or coders and business managers. This class must be conversant in data science and must have relevant subject matter business expertise.

II. Resolution

The Academic Programs Committee recommends that the Provost approves the Masters of Quantitative Management degree as proposed by Fuqua. The proposal is strong and APC is wary of denying Fuqua its potential first-mover advantage among peer schools by unnecessarily delaying approval. Moreover, the issues of concern to APC are issues of overlap and synergy, which are not fully within Fuqua's control.

Nevertheless, in light of the Committee's concern about synergy and overlap, the Committee also recommends the following to the Provost:

- a. Dr. Keith Whitfield, as Vice Provost for Academic Affairs should convene the relevant stakeholders from Fuqua, Pratt, Economics, SSRI, and iiD to discuss synergies, differentiation, and potential areas of collaboration for data science.
- b. To assess whether these overlapping programs are creating an unhealthy competitive environment for potential students and faculty resources, the Provost's Office should request that any entity currently awarding a master's in data science or proposing a master's in data science must provide to both Dr. Paula McClain as Dean of the graduate school (or her designate) and Dr. Whitfield each program's content, proposed courses, subject matter

background of teaching faculty, undergraduate majors of student recruitment pool, and student placement. An assessment of overlap can then ought to be included in each program's periodic post-approval review.

- III. Vote on March 4, 2016
12 approve, 0 opposed or abstains, 1 missing