UNIVERSITY
OF MIAMI
FACULTY SENATE

MEMORANDUM

To: Donna E. Shalala, President

From: Richard L. Williamson
            Chair, Faculty Senate

Date: November 21, 2013

Subject: Faculty Senate Legislation #2013-18(B) – Name Change from the Master of Science in Management Science TO the Master of Science in Business Analytics, School of Business Administration

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The Faculty Senate, at its November 20, 2013 meeting, voted unanimously to approve the proposal from the School of Business Administration to change the name of the Master of Science in Management Science TO the Master of Science in Business Analytics, School of Business Administration.

The Master of Science in Business Analytics aims to address the growing demand from masters-level business graduates wishing to pursue a professional career in business analytics. The program provides the skills necessary to gather, manipulate, understand, and make use of "big data" in a business context. The existing MS degree in Management Science has a very strong overlap with the proposed degree, but Business Analytics has a better recognition in the business community than Management Science and better explains the nature of the field. Hence it is appropriate to change the name to Master of Science in Business Analytics.

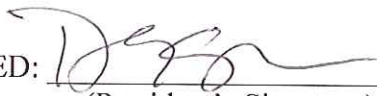The proposal of the School of Business Administration is enclosed for your reference.

This legislation is now forwarded to you for your action.

RLW/rh

Enclosure

cc: Thomas LeBlanc, Executive Vice President and Provost
      Eugene Anderson, Dean, School of Business Administration
      Anuj Mehrotra, Vice Dean, Graduate Business Programs
      Yongtao Guan, Professor, Department of Management Science

CAPSULE: Faculty Senate Legislation #2013-18(B) – Name Change from the Master of Science in Management Science TO the Master of Science in Business Analytics, School of Business Administration

APPROVED: _(President's Signature)_ _____   DATE: 12/9/13

(President's Signature)

OFFICE OR INDIVIDUAL TO IMPLEMENT: _DEAN ANDERSON_

EFFECTIVE DATE OF LEGISLATION: _____IMMEDIATELY_____
(if other than June 1 next following)

NOT APPROVED AND REFERRED TO: _____

REMARKS (IF NOT APPROVED):_____

UNIVERSITY OF MIAMI
SCHOOL of BUSINESS
ADMINISTRATION

MEMORANDUM

TO: General Welfare Committee
           Faculty Senate

FROM: Anuj Mehrotra, Vice Dean Graduate Business Programs

CC: Eugene Anderson, Dean

Subject: Change of Name: Master of Science in Business Analytics

Date: October 23, 2013

In its effort to continuously strengthen its portfolio of programs, the School of Business Administration is proposing the renaming of the Master of Science in Management Science which has been inactive during the last few years to the Master of Science in Business Analytics, as this has better recognition in the industry than Management Science.

The Office of Planning, Institutional Research and Assessment (PIRA) has advised that we provide relevant information on this Specialized Master Degree Program in order to comply with appropriate SACS accreditation procedures. We are therefore submitting the same information to PIRA.

The proposal to reactivate and change the name of this new degree was discussed the School of Business Administration's School Council and unanimously approved October 4, 2013. This is on the Agenda of the Graduate Council meeting scheduled for November 19th.

Please find attached the letters of support from the Dean of the School, as well as the Chairs of the Academic Departments of the School of Business Administration, an Executive Summary of the program including the Curriculum and the General Description approved by School of Business Administration School Council on October 4, 2013. It was also approved by the SBA faculty on October 16, 2013.

The Master of Science in Business Analytics will not require the hiring of new faculty. Any new staffing needs will be analyzed at the end of FY2013 in the context of all Graduate Business needs at that time.

We seek approval of the reactivation and change of name of the Master of Science in Management Science to the Master of Science in Business Analytics. We are at the disposition of the General Welfare Committee and the Faculty Senate to provide any additional information that is deemed necessary for the timely approval of this reactivation/change of name.

Master of Science in Business Analytics (MSBA)
Executive Summary

Overview

The School of Business Administration has traditionally offered a series of Graduate Business Programs including a Full Time Master in Business Administration (MBA), Accelerated One Year MBA, EMBA, Master of Science and Master of Arts Programs. As a result of an in-depth evaluation of our current Specialized Master's Degree Programs, as well as significant growth nation-wide in the demand and offerings of these programs, the School of Business Administration is optimizing its portfolio of specialized Master Degree Programs. This diverse portfolio of Master Degree programs will better address the growing demand and position the School for the foreseeable future to continue to attract interest from qualified applicants. One such program that the School proposes is in the area of business analytics because of the need from the organizations for qualified business analysts to enable them to better utilize the resources and maximize their potential. This has become particularly important in recent years with the continued evolution in information technology and associated big data.

The Master of Science in Business Analytics (MSBA) aims to address the growing demand for masters-level business graduates for those wishing to pursue a professional career in business analytics with the skills necessary to gather, manipulate, understand and make use of big data in a business context. The field of business analytics has strong roots in Management Science and like some other Business Schools (as an example, Tepper School of Business, Carnegie Mellon University) the Management Science or Operations Research areas have introduced a similar degree in their offerings. Our existing MS degree in Management Science has very strong overlap with the proposed degree and Business Analytics has better recognition in the business community than Management Science. Hence it is appropriate to change the name of the MS in Management Science to MS in Business Analytics. The proposed degree also includes updated curriculum that includes specialty classes that address the current skills demanded of business analysts from a wide spectrum of organizations, both public and private.

The Master of Science in Business Analytics is aimed at young professionals with strong quantitative skills with an interest in strengthening their expertise in business analytics. Relative to our MBA programs which provides students a vast business knowledge base, this Specialized Master of Science Degree offers a narrowly-focused course of study over a shorter period of time. It is designed to generate principled leaders in a much smaller domain of expertise. This program will provide the necessary technical and analytical training to understand and tackle big data issues in any type of organization.

Curriculum

The MSBA is a 32 credit degree taken over a one year period which will train professionals to develop in four main phases of Analytics: data base management, consolidation and preparation for analysis, descriptive (understanding of data, what business inferences can be made from available data), predictive (use of data to forecast), and prescriptive (use of understanding of data and the forecasts to determine the best courses of action to achieve

business goals). The MSBA provides focused, graduate level education meant to prepare students to be comfortable with data driven decision making. Our graduate should be able to demonstrate the ability to:

- Work with Big Data
  From its initial acquisition, its storage, and final analysis, working with "big data" is a necessary skill in working with web applications, social media, advertising, and high-frequency financial data. Students will be able to use big data tools and approaches with the analytical and visualization tools introduced in statistical decisions making and data visualization courses of the program.

- Develop and Use Data Mining Methods and Software Tools
  Data mining relies on sophisticated algorithms to analyze data systematically to improve decision-making. The data mining course will examine how data analysis technique can be used to improve decision making. Students will study the fundamental principles and techniques of data mining and, using software, examine real-world examples and cases of data-mining applications.

- Understand and Use Decision Models
  Students will apply mathematical and statistical models to real world problems to make better managerial decisions. Using software tools designed for handling big data, students will obtain solutions to a variety of managerial problems. These techniques will be developed in the management science modeling and operations analytics courses of the program.

- Develop and Use Predictive Models
  Students will be able to develop and use various predictive models and apply these methods to classic business problems. As new types of data observations that were unthinkable just a few years ago are becoming available, it gives rise to new and powerful predictive analytics driving emerging business models. These techniques will be developed in the applied regression and forecasting course.

Courses in the degree are divided into two groups: Core and Specialty. Every student takes all the Core courses, plus a subset of the Specialty courses. Specialty courses build on the Core basis and allow students to focus on particular sub-areas of interest. In this document we describe a general-purpose M.S. in Business Analytics. As the set of Specialty courses grows larger over time, however, one can envision specializations of the degree such as a M.S. in Healthcare Analytics or M.S. in Marketing Analytics, which would use the same Core basis, but differ with respect to the Specialty courses.

Business Core Courses (22 - 23 credits): From the existing Certificate in Business Administration (CBA), students take the three 4-credit courses listed below. These courses provide students with a general understanding of fundamental business disciplines. The courses prepare students for the business applications of big data.

- Fundamentals of Economics, Accounting and Finance (BUS 630)
- Introduction to Strategy, Markets and Management (BUS 632)

- ○ Business Plan Fundamentals and Communications (BUS 633)
- ○ Statistics for Managerial Decision Making (MAS 631)
- ○ Management Science Models for Decision Making (MAS 632)
- ○ Applied Regression Analysis and Forecasting (MAS 637)
- ○ Data Mining and Knowledge Acquisition (MAS 548)
- ○ Data Acquisition, Preparation, and Visualization (DataAPV)

Specialty Courses (10 or 11 credits): The Business Analytics Specialty requires that the students take five courses from the set of courses shown below. Courses marked with an asterisk "*" are required of every student.

- ○ Design of Experiments (MAS 635)
- ○ Introduction to Quality Management (MAS 633)
- ○ Business Intelligence Technologies (CIS 613) (2 credits)
- ○ Marketing Analytics (MktAnaly) (2 credits)
- ○ Computer Simulation Systems (MAS 547 or IEN 547)
- ○ Capstone Project Course* (Capstone)
- ○ Database Design and Management (EEN 567)

In the future, as the degree matures and grows, we may expand the Specialty Courses by offering courses in Healthcare Analytics, Text Mining, Big Data, Pricing and Revenue Analytics, Applied Time Series Analysis, and Applied Multivariate Statistics.

The majority of courses to be offered in the Master of Science in Business Analytics are already taught in the School of Business Administration in the Full Time MBA and in the Certificate of Business Administration. Also, the College of Engineering has agreed to cooperate by permitting students in this program to enroll in a few courses that may be of interest (Electrical/Computer and Industrial Engineering Courses)

The target enrollment for the start of the program is 10 to 15 students, with the potential of growth to approximately 30 students per entering cohort.

Proposal to establish a Master of Science Degree in Business Analytics

1. Rationale:

Short Description and Objectives

The M.S. in Business Analytics is a 32-credit degree to be completed over the course of one year that will train professionals to develop skills necessary to gather, manipulate, understand and make use of big data in a business context. This set of skills touches on the four main phases of Analytics: *data base* management, consolidation and preparation for analysis, *descriptive* (understanding of data, what business inferences can be made from available data), *predictive* (use of data to forecast), and *prescriptive* (use of understanding of data and the forecasts to determine the best courses of action to achieve business goals).

As Business Analytics professionals, our students should be comfortable with data driven decision making. Our graduate should be able to demonstrate the ability to:

o Work with Big Data

From its initial acquisition, its storage, and final analysis, working with "big data" is a necessary skill in working with web applications, social media, advertising, and high-frequency financial data. Students will be able to use big data tools and approaches with the analytical and visualization tools introduced in statistical decisions making and data visualization courses of the program.

o Develop and Use Data Mining Methods and Software Tools

Data mining relies on sophisticated algorithms to analyze data systematically to improve decision-making. The data mining course will examine how data analysis technique can be used to improve decision making. Students will study the fundamental principles and techniques of data mining and, using software, examine real-world examples and cases of data-mining applications.

o Understand and Use Decision Models

Students will apply mathematical and statistical models to real world problems to make better managerial decisions. Using software tools designed for handling big data, students will obtain solutions to a variety of managerial problems. These techniques will be developed in the management science modeling and operations analytics courses of the program.

o Develop and Use Predictive Models

Students will be able to develop and use various predictive models and apply these methods to classic business problems. As new types of data observations that were unthinkable just a few years ago are becoming available, it gives rise to new and powerful predictive analytics driving emerging business models. These techniques will be developed in the applied regression and forecasting course.

The Business Analytics Program and the Vision, Mission, and Strategic Priorities of the School

SBA Vision

School Vision: Our vision is to become a premier learning community engaged in discovery and dissemination of transformative business knowledge that enables its members to advance sustainable prosperity worldwide.

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SBA Mission

School Mission: Our mission is to develop innovative ideas and principled leaders that transform global business and society.

M.S. in Business Analytics: The globalization of business and proliferation of big data and the technological advances, particularly in the last decade, have resulted in increased focus on part of the organizations and corporations to understand and analyze data to better achieve their goals. This has become paramount for businesses to remain competitive and is true for both non-profit and for-profit organizations. The demand for well-trained business analysts has resulted in graduate programs in business to offer specialized masters programs that prepare the students to meet the challenges better. This M.S. in Business Analytics will provide formal training to students seeking to develop a better understanding of the uses and other issues surrounding big data.

This graduate degree conforms to the strategic priorities of the School of Business Administration:

Strategic Priorities

Create and disseminate high-impact intellectual capital. The M.S. in Business Analytics will provide our students with the necessary intellectual capital to be able to move out into global society and deal with the applications of big data in a principled manner that contributes to the bottom line of an organization.

Pursue select 'Areas of Excellence'. The M.S. in Business Analytics will work with big data sets in the School's areas of excellence; e.g., Healthcare, Real Estate, and International Business. As one example, we are well positioned to enable our faculty and students to have access to big data from the UHealth System at the University of Miami.

Foster stakeholder engagement. There are many stakeholders for the M.S. in Business Analytics. Some examples are students, faculty, organizations providing the big data, and companies hiring our graduates. The M.S. in Business Analytics is a timely offering to help foster stakeholder engagement across the board as more and more organizations seek and demand this specialized knowledge.

Build global perspective. The M.S. in Business Analytics lends itself well to address the needs of international and multi-national companies to solve their big data problems. - Many of our faculty are already working on research projects with several multi-national and international companies in China, India and in Latin America and are well positioned to help the graduate students to be trained well to be able to address the big data needs from a global perspective.

Distinguishing Features from the MBA Program

The M.S. in Business Analytics is very different from the MBA program. The MBA program is designed to generate principled leaders in the global economy, while the M.S. in Business Analytics program is designed to generate principled leaders in a much smaller domain of expertise. These students will be technically trained to understand and tackle BIG data issues in any type of organization.

Career Opportunities for Graduates

The demand for business analytics graduates is on the rise as almost every big organization struggles to derive the maximum value from their investments and resources and seeks well trained business analysts. These organizations represent a wide spectrum including consulting companies, financial

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corporations, technology corporations and many of our partners including UHealth, Quantros, VITAS, Publix's Risk Management Division, and Cruise Lines, to name a few.

2. Resources:

Library

Students enrolled in the MSBA will have access to appropriate collections and other learning resources that support all educational programs wherever they are offered and at the appropriate degree level. The University of Miami Libraries maintains collections that effectively support the research, teaching, preservation, and learning needs of the University community. The Libraries include extensive print and electronic resources, including state of the art discovery, preservation, digital development and bibliographic management tools. To maximize the use of collections, the Libraries offer facilities for study, research, and discovery, integrated systems to provide access and services, and subject and technology expertise for consultation, instruction and information, and the creation of knowledge and scholarship.

The University of Miami libraries rank among the top research libraries in North America. The Richter Library, the University of Miami's main library, houses collections that serve the arts, architecture, humanities, social sciences, and the sciences. It is a depository for federal and state government publications. Rare books, maps, manuscript collections, and the University Archives are housed in the Special Collections Division and in the Cuban Heritage Collection.

In addition to the Richter Library, the School of Business Administration houses the Judi Prokop Newman Business Information Resources Center. This Center functions as a "virtual" or "paper-less" library. Students have unlimited access to the Information Center from home or office via the Internet using a logon ID and password. Students are able to access a multitude of business research databases including Bloomberg, Compustat, Disclosure, Hoover's, Lexis/Nexis, etc. The Center is staffed by a full-time Business Information Specialist and team of research assistants. Additionally, the Center's Information Specialist offers a workshop, at the orientation, for the students in graduate business programs on topics such as company, industry, and legal research.

Laboratory Facilities, Equipment and Space:

The courses in the proposed M.S. in Business Analytics program will be scheduled at times which optimize the equipment and space available to the school. Further, all computer software such as Excel and SAS are available for free on the School of Business computer network.

Other Resources

It is determined that this program will not create additional burdens on the current resources of the SBA.

3. Curriculum:

a. List the major division or divisions of the discipline in which the proposed graduate work will be offered:
   1. Management Science
   2. Marketing
   3. Computer Information Systems
   4. Electrical and Computer Engineering
   5. Industrial Engineering

Courses in the degree are divided into two groups: Core and Specialty. Every student takes all the Core courses, plus a subset of the Specialty courses. Specialty courses build on the Core basis and

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allow students to focus on particular sub-areas of interest. In this document we describe a general-purpose M.S. in Business Analytics. As the set of Specialty courses grows larger over time, however, one can envision specializations of the degree such as a M.S. in Healthcare Analytics or M.S. in Marketing Analytics, which would use the same Core basis, but differ with respect to the Specialty courses.

We list existing courses with their official titles, followed by their official code in parentheses. Some of the core classes are common to the new certificate program offered by the School called the Certificate in Business Administration (CBA). The new courses are given a short name in parentheses for ease of reference later in the document.

Core CBA Courses (12 credits): From the existing Certificate in Business Administration (CBA), students take the three 4-credit courses listed below. These courses provide students with a general understanding of fundamental business disciplines. The purpose of the hub courses is to prepare a student for the business applications of big data.

- Fundamentals of Economics, Accounting and Finance (BUS 630)
- Introduction to Strategy, Markets and Management (BUS 632)
- Business Plan Fundamentals and Communications (BUS 633)

Other Core Courses (10 or 11 credits): The remaining core courses in this degree comprise the following five courses that build a solid analytic foundation.
- Statistics for Managerial Decision Making (MAS 631)
- Management Science Models for Decision Making (MAS 632)
- Applied Regression Analysis and Forecasting (MAS 637)
- Data Mining and Knowledge Acquisition (MAS 548)
- Data Acquisition, Preparation, and Visualization (DataAPV)

Specialty Courses (10 or 11 credits): The Business Analytics Specialty requires that the students take five courses from the set of courses shown below. Courses marked with an asterisk "*" are required of every student.

- Design of Experiments (MAS 635)
- Introduction to Quality Management (MAS 633)
- Business Intelligence Technologies (CIS 613)
- Marketing Analytics (MktAnaly)
- Computer Simulation Systems (MAS 547 or IEN 547)
- Capstone Project Course* (Capstone)
- Database Design and Management (EEN 567)

Ideally, the Specialty set would have more courses to give students more freedom of choice (the capstone project would remain mandatory). In the future, as the degree matures and grows, we may expand the Specialty Courses by offering courses in Healthcare Analytics, Text Mining, Big Data, Pricing and Revenue Analytics, Applied Time Series Analysis, and Applied Multivariate Statistics.

b. Evaluate the adequacy of your present undergraduate and graduate curricular structure for the proposed program.

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The courses in this proposed program mesh nicely with the existing structure with a mix of 2 and 3 credit classes being currently offered for other programs including the MBA program.

c. List any anticipated additions, deletions, and changes in your current curricular structure resulting from the new program. For each item, list the faculty involved.

The program will involve only three (2 credit) additional courses. The additional classes may also be of interest to students in other graduate programs:

- MAS 6XX   Data Acquisition, Preparation and Visualization
- BUS 6XX   Capstone Project Course
- MKT 6XX   Marketing Analytics

d. List any current, anticipated, or agreed upon cooperative or interdisciplinary work with other components of the University or with any extramural agency as pertinent to the proposed program.

This program will utilize courses from the Electrical and Computer Engineering Department in the College of Engineering. We have approached the chair of the Department of Electrical and Computer Engineering and have obtained his support for our students to potentially take elective courses such as EEN 567 from his department.

We have also obtained support from the Department of Marketing to create a course on Marketing Analytics. MAS 547/IEN 547 is a course cross-listed between the Departments of Management Science and Industrial Engineering in the College of Engineering, and its teaching has been traditionally well coordinated by the two departments. We have obtained written support formt eh chair of Industrial Engineering for our program.

e. Provide a detailed description of the proposed program.

Fall Semester:
Term 1:

    BUS 632: Introduction to Strategy, Markets and Management – Jeff Kerr/Ram Krishnan
    DataAPV: Data Acquisition, Preparation and Visualization
    MAS 631: Statistics for Managerial Decision Making

Term 2:

    CIS 613: Business Intelligence Technologies
    MAS 637: Applied Regression Analysis and Forecasting
    MAS 633: Introduction to Quality Management

Semester long courses:

    MAS 548: Data Mining and Knowledge Acquisition
    EEN 567: Database Design and Management

Spring Semester:

Term 1:
    BUS 630: Fundamentals of Economics, Accounting and Finance -- Tim Burch/Diana Falsetta BUS
    MAS 632: Management Science Models for Decision Making
    MAS 635: Design of Experiments

Term 2:
    BUS 633: Business Plan Fundamentals and Communications -- Joseph Ganitsky/Don Donelson
    Mkt Analy: Marketing Analytics
    Capstone Project

Semester long courses:
    MAS 547: Computer Simulation Systems

Ethics component: As someone who has access to large amounts of data, including sensitive and personal information, a business analytics professional needs to be trained to behave in an ethical manner when making use of such data. In our program, we envision ethics training to be a combination of seminars distributed throughout the year, and delivered by ethics experts from the school of business faculty, as well as ethics lessons in the context of both Core Courses such as DataAPV and MAS 548 and Specialty Courses such as MAS 633.

Computer programming component: It is important for business analytics professionals to have enough computer programming skills to allow them to deal with data extraction, transfer, and formatting, as well as the creation of and solving analytical models. This does not mandate that the students must be fully trained as programmers in the same way a professional programmer would. The required programming skills will be taught to the students as part of the courses in which these skills are used, such as MAS 547, MAS 631, MAS 635, MAS 637 and MAS 548.

f. Teaching: What kinds of teaching will prevail in the program, i.e., clinical, classroom, independent research, seminars, online, etc., and in what proportion?

    The courses in the program will largely be lecture type courses with projects, and a capstone project course.

g. Describe the expected distribution of graduate students among advisors.

    N/A

h. Describe any colloquia series, special seminars, or conferences that will be held.

    N/A

i. Include Learning Outcomes Assessment Plan.
    See Attachment C

4. Faculty
a. Include the complete C.V. of each faculty member who will participate in the program. The graduate teaching experience and grants received of the person concerned should be included in each C.V.

Please see the included C.V.s.

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b. Estimate the need for additional faculty, including in each instance

No additional faculty will be needed for this iteration of the program.

c. Describe the interaction of the proposed program with other graduate programs, e.g., thesis and dissertation committees.

At the current time, there are no known interactions with other programs at the University, other than students in the Business Analytics program attending courses already being offered by other programs.

5. Students
a. Estimate the number of students in the program and the pool from which they will be selected.

It is difficult to predict the number of students that will be entering the first class. However, we anticipate about 15 highly qualified students. Students in the M.S. in Business Analytics will likely have backgrounds in the technical aspects of business (e.g., Marketing Research, Supply Chain management, Lean Six Sigma, Finance, Accounting, etc.), engineering (Computer, Electrical, Biomedical, etc.), Healthcare (e.g., Health Infomatics), MBA/MD students (e.g., Electronic Medical Records in Cerner and EPIC), Mathematics (e.g., Statistics), to name a few areas of application. These students are likely to have some of the computer programming background and statistical background needed to excel in working with big data.

b. Describe requirements for admission to and expected retention of students in the proposed program.

The Graduate Admissions Committee welcomes applications from individuals whose undergraduate degrees are from accredited colleges or universities. Acceptance is based upon an evaluation of all credentials presented by the applicant. The following are the requirements of admission:
   o   Complete online application
   o   Resume
   o   Transcripts
   o   GMAT or GRE
   o   For international students, IELTS or TOEFL scores are required.
   o   At least one letter of recommendation

c. Describe the anticipated need for and specific use of teaching assistants and research assistants in the program. Include the number and estimated stipends for each assistant (indicate stipend level and whether 9-month or 12-month).
N/A

6. Administration
a. Estimate the anticipated administrative increments imposed by addition of this program, i.e.,
   o Need for additional secretarial help. None
   o Need for additional office equipment and supplies. None
   o Need for additional travel, publication costs, and other funds. None

b. Describe the arrangements for administration and for academic direction of the program.

This program would be administered by the Office of Graduate Business Programs within the SBA.

7. **Budget (three-year)** Provide a three-year projected budget commencing with the year the program gets under way. Each year's budget should include all anticipated income (use current-year tuition credit costs and projected overhead) and all anticipated incremental costs, e.g., new faculty with fringe, library additions, teaching assistantships, laboratory equipment, staff, travel funds, etc.

See attachment B.

8. Comparisons

Before designing our MSBA program, we gathered information from several other similar programs that have excellent reputation in this area, namely: Northwestern University, North Carolina State University, New York University, Carnegie Mellon University, Indiana University, and University of Chicago. Some of their characteristics, including topics covered in their curriculum, are summarized in the table in Attachment D.

When it comes to content, we made sure to include the main core topics that appeared in almost every program surveyed such as: probability and statistics (including regression, forecasting, design of experiments); data gathering, handling, and visualization; database design and management; data mining; optimization; simulation; marketing analytics; ethics component; capstone project, etc. In addition, we view our CBA courses on general business fundamentals (BUS 630; BUS632; BUS633), our business intelligence course, as well as our six-sigma training as important points of differentiation from those programs.

9. Transfer of coursework to graduate degree programs
Students who have received MBA degrees or other graduate degrees may have courses that could transfer into this program subject to the University's rules concerning the number of credits that can be transferred between programs.

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Attachment A

Data Acquisition, Preparation and Visualization Course Syllabus

Course Description and Learning Objectives: This course teaches a variety of skills that are useful for anyone dealing with data. Data gathering is an often tedious and arduous job that is almost always overlooked in many courses. Once gathered, data typically includes mistakes, omissions, and inconsistencies that need to be dealt with before it can be used. There are significant issues that arise when similar data are acquired form different sources. Finally, data visualization capitalizes on human facilities for processing visual information and thereby improves comprehension, memory, inference, and decision making.

The learning objectives for this course are to:
- Learn the do's and don't's of data gathering.
- Learn about potential sources of data, ways of obtaining it, ways of storing it.
- Learn efficient techniques to transfer data between applications and/or databases.
- Learn what the most common data issues are, and how to fix them.
- Learn which kinds of layouts, graphs, and display choices are more suitable for a given kind of data set, and/or a given purpose.
- Learn to use a variety of data visualization software.

Textbooks: "Show Me the Numbers: Designing Tables and Graphs to Enlighten" and "Now You See It: Simple Visualization Techniques for Quantitative Analysis", both by Stephen Few.

Grading: Grades will be based on two exams, homework assignments, and class participation.

Attendance Policy: Attendance is required and will affect your participation score.

Honor Code: Students are expected to adhere to the University of Miami Honor Code and the full range of consequences may be pursued in case of a violation.

Tentative Schedule:
Weeks 1 and 2: Data Acquisition:
- Different types of data, formatting, and encoding
- Determining data needs to answer specific questions
- Sources of data and data collection techniques
- Basic database concepts

Weeks 3 and 4: Data Validation Issues:
- Data issues:
  - Missing values and, incomplete data
    - Techniques to handle missing values
  - Identification methods for erroneous data
    - Data validation techniques
      - Simple and cross-validation

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Continued Attachment A

- o Midterm at the end of week 3.

Weeks 5 and 6: Data Preparation and Visualization:

- o Data formats for various analytical and visualization packages
- o Merging data files
- o Data Normalization
  - o Combining data from different sources
- o Visual perception and graphical communication
- o Skills for diverse types of visual analysis: part vs. whole; deviation, distribution, and correlation; univariate vs. multivariate; time series
- o A sample of visualization software packages

Week 7: Final Exam

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Continued Attachment A

Capstone Project Course Syllabus

Course Description and Learning Objectives: The goal of this course is to combine many of the techniques learned in previous courses into a single coherent project. Students will work in groups of up to 4 people. The topic of the project can either be assigned by the instructor or chosen by the students according to their own preference. Projects chosen by the students require approval by the instructor within the first week of classes.

The learning objectives for this course are to:
o   Learn to define the scope and objectives of an Analytics project;
o   Practice data collection and cleaning from scratch;
o   Learn to identify which metrics matter more and which matter less given your goals, data availability, and time constraints;
o   Apply and combine techniques from different areas of Analytics, from beginning to end;
o   Learn the importance of meaningful, concise, and clear reporting to different types of stakeholders, many of which are not analytical people and prefer insight to jargon.

Textbook: No textbook is required.

Grading: The final grade will be a function of the grades received for each of the main components of the project. Each component includes a deliverable, which can be a written report or a presentation. The components are: (i) definition of the project's scope and objectives; (ii) data collection and cleaning; (iii) descriptive analysis of the data and identification of metrics of interest; (iv) predictive analysis of the data within the business context; (v) prescriptive analysis of the problem and final recommendation; (vi) group presentation.

Attendance Policy: Attendance is required and will affect your participation score.

Honor Code: Students are expected to adhere to the University of Miami Honor Code and the full range of consequences may be pursued in case of a violation.

Tentative Schedule: The course extends over an entire semester and meets once a week. In weeks when nothing is due, the instructor uses the lecture to answer questions, pose questions, and provide feedback to groups on their progress. The instructor is also available during the week to answer questions.

Week 1: Groups select projects.
Week 2: Q&A session.
Week 3: Component (i) due.
Week 4: Q&A session.
Week 5: Q&A session.
Week 6: Component (ii) due.
Week 7: Q&A session.

Week 8: Component (iii) due.
Week 9: Q&A session.
Week 10: Component (iv) due.
Week 11: Q&A session.
Week 12: Component (v) due.
Week 13: Q&A session.
Week 14: Component (vi) due.

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Continued Attachment A

Marketing Analytics Course Syllabus

Instructor: Dr. Joseph Johnson

Course Description and Objectives: More and more firms have come to realize that data is one their key strategic assets. This has made analytics an important subject for business majors. Two key areas where firms find analytics useful are in the domains of customer management and social media analysis. The goal of this course is to give you a hands-on experience with data and analytics and teach you how to draw strategic insights from data.

The course is based on several of my research projects and conference presentations. These are listed in course pack section of my syllabus. While these are not required material for the class it will help you sample some of the applications of analytics in marketing. The class will revolve mainly around in-class demonstration, exercises and homework assignments. Through these you will learn how analytics is used in marketing areas such as:

- Customer segmentation
- Identifying high value customers
- Designing optimal price promotions
- Brand management using text data from social media
- Media management using analytic tools on web-site and social media data
- Integrating traditional and digital media to optimize customer response

The basic philosophy for this course is to blend theory and practice of analytics. You will use different kinds of data for example customer purchase history, demographic data and unstructured text data and apply different techniques to generate marketing insights. Few marketing situations have a definitive, unqualified "right" answer as to the best analytical approach. However, when armed with relevant and comprehensive theories, appropriate frameworks and models, and familiarity with past successful and unsuccessful analytical strategies, managers can make better and more informed decisions that are more likely to yield successful implementation.

In this course you will be learning by doing. Early in the course each student, working in small groups, will be asked to work on a marketing analytics project. Throughout the course you will then be asked to apply the various concepts and tools discussed in class to your projects. During the last week of the course, you will give a presentation that details the nature of the marketing problem and your proposed approach to solving the problem. A final case project is due on the last day of class.

While the course has obvious relevance for those contemplating marketing or consulting careers, it is also appropriate for a range of professionals as there is little in business that doesn't at some time or another wrestle with customer or media issues.

Textbook: "Database Marketing: Analyzing and Managing Customers" by Robert C. Blattberg, Byung-Do Kim, and Scott A. Neslin.

Course Pack: In addition to the textbook you will have to obtain the following course pack online:

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Continued Attachment A

o "Identifying High Value Customers: A Neural Network Application," (with Edward Ip) in "*Neural Networks in Business: Techniques and Applications,*"Kate Smith and Jatinder Gupta (editors)., *2002*, Idea Group Publishing, Hershey, PA 17033.

o "To Whom, When, and How Much to Discount? A Constrained Optimization of Customized Temporal Discounts," Joseph Johnson, Gerard Tellis and Edward Ip.

o "Does Marketing Move Markets? A Text Mining Based Informational Value Perspective," Joseph Johnson, Brent Kitchens, Deb Mitra, and Praveen Pathak.

o "Interactive Profiler: An Online Data Visualizing Application for Educational and Marketing Databases," Edward H. Ip, Philip Leung and Joseph Johnson.

Evaluation: Evaluations in the class will be based on the following scoring rule:

Mid-term exam:	20%
Final exam:	35%
Homework sets:	15%
Final project presentation:	10%
Project write-up:	20%

Tentative Schedule:

Session	Cases, Assignments and Examinations
Session 1	Introduction to Marketing Analytics
Session 2	Market Response Models
Session 3	The Science and Art of Market Segmentation
Session 4	Positioning and Marketing Strategy (Due: Homework 1: Clustering)
Session 5	Identifying High Value Customers
Session 6	Midterm
Session 7	Modeling Advertising Response
Session 8	Optimizing Promotions (Due: Homework 2: DEMON Model)
Session 9	Text Mining for Social Media analysis
Session 10	Analytics for Integrating Media Response
Session 11	Analytics for Distribution and Sales force planning Due: Homework 3: Media Optimization
Session 12	Project Presentation
Final Exam	Cumulative exam

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Attachment B

Web version – redacted

For more information please contact the Senate Office.

Attachment B

Attachment C

Mission Statement/Program Objectives

University of Miami Mission Statement

The University of Miami's mission is to educate and nurture students, to create knowledge, and to provide service to our community and beyond. Committed to excellence and proud of the diversity of our University family, we strive to develop future leaders of our nation and the world.

School of Business Administration

Our mission is to develop innovative ideas and principled leaders that transform global business and society.

Program Objectives

◊ Provide students with the tools to understand and interpret data for the benefit of their organizations and corporations.
◊ Provide formal training to students seeking to develop a better understanding of the uses and other issues surrounding big data.
◊ Prepare students to better meet the analytical challenges that have become paramount for businesses to remain competitive.

Definition & Assessment of Intended Outcomes

◊ Outcome 1: Develop skills in working with big data
  ○ Assessment Measure 1: Questions embedded in Exams, Quizzes and assignments in MAS631 and DataAPV
  ○ Assessment Measure 2: Student Exit surveys

◊ Outcome 2: Develop and Use Data Mining Methods and Software Tools
  ○ Assessment Measure 1: Questions embedded in Exams, Quizzes and assignments in MAS548
  ○ Assessment Measure 2: Student projects
  ○ Assessment Measure 3: Student Exit surveys

◊ Outcome 3: Understand and Use Decision Models
  ○ Assessment Measure 1: Questions embedded in Exams, Quizzes and assignments in MAS631 & 632
  ○ Assessment Measure 2: Student Exit surveys

◊ Outcome 4: Develop and Use Predictive Models
  ○ Assessment Measure 1: Capstone project
  ○ Assessment Measure 2: Student Exit surveys

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Attachment D: Comparisons

University, School	Name of Degree	Web site
Northwestern, McCormick School of	Master of Science in Analytics	http://analytics.northwestern.edu
North Carolina State, Institute for Advanced Analytics	Master of Science in Analytics	http://analytics.ncsu.edu
NYU, Stern School of Business	Master of Science in Business Analytics	http://www.stern.nyu.edu/programs-admissions/global-degrees/business-analytics/index.htm
Carnegie Mellon, Tepper School of Business	Their MBA degree includes a Business Analytics track	http://tepper.cmu.edu/mba/mba-curriculum/mba-programs-coursework/fulltime-mba/mba-tracks/business-analytics/index.aspx
Indiana University, Kelley School of Business,	Their MBA degree includes a Business Analytics major	http://www.kelley.iu.edu/IBA/
University of Chicago, MS in Analytics	Master of Science in Analytics	https://grahamschool.uchicago.edu/credit/master-science-analytics/index

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Analysis of Business Analytics Programs from Other Schools
Key:
c = core class

Web version – redacted

For more information please contact the Senate Office.

Web version – redacted

For more information please contact the Senate Office.

Attachment E: Course Descriptions

BUS 630   Fundamentals of Economics, Accounting, and Finance (4 credits)
This course covers fundamentals of business economics, accounting, and finance. Economic themes primarily focus on microeconomic topics such as demand, supply, elasticity, and forms of competition. Accounting concepts include corporate financial statements, cost-volume-profit analysis, and traditional and activity-based cost accounting. Finance topics include time value of money, capital budgeting basics, foreign exchange, risk and return, modern portfolio theory, and financial markets. The course includes an integration of many of these concepts in areas necessary to develop a business plan.

BUS 632   Introduction to Strategy Markets, and Management (4 credits)
This integrated course focuses on the external environment in which business firms operate and on the management techniques through which managers organize and motivate human resources to support strategic initiatives. It emphasizes in particular three critical sets of actors: customers, competitors, and employees. The purpose of the course is to introduce the student to basic conceptual frameworks and analytic models that managers use to a) identify and understand the customer segments that make up a marketplace, b) formulate strategies that achieve a competitive advantage within that marketplace, and c) lead and motivate employees in the execution of competitive strategies.

BUS 633   Business Plan Fundamentals and Communications (4 credits)
This course provides students with the fundamentals in the development and preparation of a business plan, as well as of oral and written business communications. Students, after exploring new venture opportunities, will develop a comprehensive business plan, including its functional components (marketing, finance, operational, human and intellectual capital plans), the support with which to secure the needed financial and human resources, and the organization to manage the new venture. Students will also enhance their communication skills with which to identify critical issues, develop reasoned positions, display data, use visual aids effectively, state persuasive and compelling arguments for written documents as well as prepared and impromptu speeches, and deal with the media.

MAS 631   Statistics for Managerial Decision Making (2 credits)
This course aims to familiarize the student with statistical theory, tools, and methods required for business systems analysis and improvement. Topics include descriptive methods, elementary probability, random variables and the distributions, hypothesis testing, confidence intervals, statistical modeling, and regression.

MAS 632   Management Science Models for Decision Making (2 credits)
This course aims to familiarize the student with Management Science tools for business systems analysis and improvement. The coverage includes linear and integer programming models, project management, simulation, queuing, and decision analysis. Some widely used software are illustrated through examples and case studies derived from business applications.

MAS 637   Applied Regression Analysis and Forecasting (2 credits)
This course aims to familiarize the student with statistical prediction. It covers simple and multiple regression methods as well as time series and forecasting models in business. Instead

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of theoretical development, the course emphasizes the application of these methods in business systems analysis and improvement.

MAS 548   Data Mining and Knowledge Acquisition (3 credits)
This course provides an introduction to the principles and techniques of data mining. Topics covered include the data mining process, data preprocessing, data mining techniques and data mining evaluation. The course will involve a combination of lectures, labs, projects and case studies.

MAS 6XX   Data Acquisition, Preparation, and Visualization (2 credits)
This course teaches a variety of skills that are useful for anyone dealing with data. Data gathering is an often tedious and arduous job that is almost always overlooked in many courses. Once gathered, data typically includes mistakes, omissions, and inconsistencies that need to be dealt with before it can be used. There are significant issues that arise when similar data are acquired form different sources. Finally, data visualization capitalizes on human facilities for processing visual information and thereby improves comprehension, memory, inference, and decision making.

MAS 635   Design of Experiments (2 credits)
This course presents tools and methodology useful in conducting experiments that provide valid answers to questions of interest to the experimenter. The course discusses an overall approach to obtaining and analyzing experimental data, the advantages of using structured multi factor experiments to screen for important factors, ways of minimizing the amount of data points needed to obtain desired information, and how to identify values of experimental factors that optimize the value of measured responses. Factorial designs, fractional factorial designs, screening designs, and response surface designs are presented. Emphasis is placed on the knowledge required for proper application of these methods through many examples in business and quality management.

MAS 633   Introduction to Quality Management (2 credits)
Introduction to the major elements of Dr. Deming's theory of management, including Dr. Deming's System of Profound Knowledge and Fourteen Points for Management. Additionally, participants are introduced to Six Sigma tools and methods. These tools and methods have been adopted with great success by many of the largest organizations in the world, for example, General Electric, Allied Signal, Dupont, American Express, and J.P. Morgan. Additionally, the course is a prerequisite for the Six Sigma Green Belt certification examination.

CIS 613   Business Intelligence Technologies (2 credits)
Course facilitates business decision makers in their understanding of data analysis tools that operate over data warehouses and 'data marts' more commonly referred to as Business Intelligence. Course focuses upon using technologies to drive effective data driven decision making through effective mining of corporate data warehouses, thus improving operational efficiency and ultimately increasing profitability. Students are exposed to the concepts, analysis techniques, data cubes, and manipulation of information extracted from a data warehouse that enables the formulation and execution of business strategies. Data analysis case studies are used to reinforce students' understanding and strategic use of results to accomplish business objectives.

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MKT 6XX   Marketing Analytics (2 credits)

More and more firms have come to realize that data is one their key strategic assets. This has made analytics an important subject for business majors. Two key areas where firms find analytics useful are in the domains of customer management and social media analysis. The goal of this course is to give you a hands-on experience with data and analytics and teach you how to draw strategic insights from data.

MAS 547   Computer Simulation Systems (3 credits)

Introduction to discrete-event computer simulation and hands-on development of simulation models. Topics include introduction to queuing theory, input and output analysis, random number generation, and variance reduction techniques. Students practice their modeling skills using commercial state-of-the-art simulation software. Assigned readings of real-life simulation projects complement the material learned in the classroom. Lecture, 3 hours.

OR

IEN 547   Computer Simulation Systems (3 credits)

Computer simulation and the development of simulation models. Application of discrete and continuous system simulation languages to systems studies is also included.

BUS 6XX   Capstone Project Course* (2 credits)

The goal of this course is to combine many of the techniques learned in previous courses into a single coherent project. Students will work in groups of up to 4 people. The topic of the project can either be assigned by the instructor or chosen by the students according to their own preference. Projects chosen by the students require approval by the instructor within the first week of classes.

EEN 567   Database Design and Management (3 credits)

Database systems design, modeling, implementation, management methodologies, and techniques. Different database systems are addressed including relational, object-oriented, object-relational, and distributed database systems. Internet (WWW) technology, data warehousing, and online analytical processing applications of database management systems and hands-on experience with commercial database systems is also included.

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UNIVERSITY OF MIAMI
SCHOOL of BUSINESS
ADMINISTRATION

MEMORANDUM

TO: Richard Williamson
            Chair, Faculty Senate

FROM: Eugene Anderson
            Dean

SUBJECT: Name Change for Master of Science in Business Analytics

DATE: October 16, 2013

This letter is forwarded to you to document my support for change of name of the Master of Science in Management Science degree program to the Master of Science in Business Analytics. The MS in MAS was deactivated several years ago, but the proposed MS in Business Analytics represents an attractive and revised curriculum to meet current demands of the business community.

This proposal was presented and unanimously approved by the School of Business Administration School Council on October 4, 2013 and by the School of Business Administration Faculty on October 16, 2013.
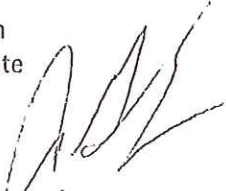
I enthusiastically support the reactivation of this program, as well as the change of name. I look forward to continue to work with the Faculty Senate regarding other initiatives.

EWA:

MEMORANDUM

DATE: October 23, 2013

TO: Richard Williamson
            Chair, Faculty Senate

FROM: Andrew Leone
            On behalf of the Chair of Accounting Department

SUBJECT: Master of Science in Business Analytics

I am writing to extend my support for the creation of the Master of Science in Business Analytics Program, as approved by the School of Business Administration School Council on October 4th, 2013.

Our department will offer the required and elective Accounting courses as needed for this program.

Cc: Eugene Anderson, Dean SBA
       Anuj Mehrotra, Vice Dean Graduate Business Programs, SBA
       Sundaresh Ramnath, Chair of Accounting Department

UNIVERSITY OF MIAMI
SCHOOL of BUSINESS
ADMINISTRATION

LJ

MEMORANDUM

DATE: October 23, 2013

TO: Richard Williamson
            Chair, Faculty Senate

FROM: René Sacasas
            Chair of Business Law Department

SUBJECT: Master of Science in Business Analytics

I am writing to extend my support for the creation of the Master of Science in Business Analytics Program, as approved by School of Business Administration School Council today.

Our department will continue to offer the required and elective Business Law courses as reflected in the proposal.

Cc: Eugene Anderson, Dean SBA
       Anuj Mehrotra, Vice Dean Graduate Business Programs, SBA

UNIVERSITY
OF MIAMI

Department of Economics   Phone: 305-284-3984
P.O. Box 248126   Fax: 305-284-2985
Coral Gables, FL 33124-6550

Manuel S. Santos, Ph.D.
Professor and James L. Knight Chair

MEMORANDUM

DATE: October 23, 2013

TO: Richard Williamson
            Chair, Faculty Senate

FROM: Manuel Santos
            Chair of Economics Department

SUBJECT: Master of Science in Business Analytics

I am writing to extend my support for the creation of the Master of Science in Business Analytics Program, as approved by the School of Business Administration School Council on October 4th, 2013.

Our department will offer the required and elective Economics courses as needed for this program.

Cc: Eugene Anderson, Dean SBA
       Anuj Mehrotra, Vice Dean Graduate Business Programs, SBA

UNIVERSITY OF MIAMI
SCHOOL of BUSINESS
ADMINISTRATION

Douglas R. Emery	Department of Finance	Ph: 305-284-4430
Bank of America Scholar	514 Jenkins	Dept: 305-284-4362
Professor of Finance and	5250 University Drive	Fax: 305-284-4800
Department Chair	Coral Gables, Florida 33124-6552	demery@miami.edu

MEMORANDUM

DATE: October 23, 2013

TO: Richard Williamson
          Chair, Faculty Senate

FROM: Douglas R. Emery
          Chair of Finance Department

SUBJECT: Master of Science in Business Analytics

I am writing to extend my support for the creation of the Master of Science in Business Analytics Program, as approved by the School of Business Administration School Council on October 4th, 2013.

Our department will offer the required and elective Finance courses as needed for this program.

Cc: Eugene Anderson, Dean SBA
      Anuj Mehrotra, Vice Dean Graduate Business Programs, SBA
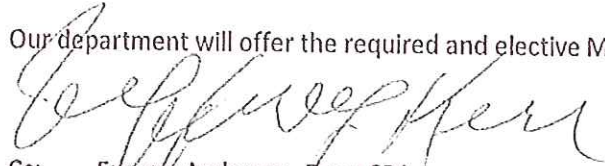
MEMORANDUM

DATE: October 23, 2013

TO: Richard Williamson
             Chair, Faculty Senate

FROM: Jeffrey Kerr
             Chair of Management Department

SUBJECT: Master of Science in Business Analytics

I am writing to extend my support for the creation of the Master of Science in Business Analytics Program, as approved by the School of Business Administration School Council on October 4th, 2013.

Our department will offer the required and elective Management courses as needed for this program.

Cc: Eugene Anderson, Dean SBA
        Anuj Mehrotra, Vice Dean Graduate Business Programs, SBA

UNIVERSITY OF MIAMI
SCHOOL of BUSINESS
ADMINISTRATION

| | |

Department of Management Science
401 Kosar/Epstein Building
P.O. Box 248237
Coral Gables, Florida 33124-6544

Ph: 305-284-6595
Fax: 305-284-2321

MEMORANDUM

DATE: October 22, 2013

TO: Richard Williamson, Ph.D.
          Chair, Faculty Senate

FROM: Yongtao Guan, Ph.D.
          Chair of Management Science Department
          Chair of the Computer Information Systems Department

SUBJECT: Master of Science in Business Analytics

I am writing in support of the proposal for M.S. in Business Analytics. This program has the enthusiastic support of the Department of Management Science and Department of Computer Information Systems which led the development of the program. Additionally, the program has been approved by the SBA School Council on October 4, 2013 and by the SBA faculty on October 16, 2013.

The Departments of Management Science and Computer Information System will offer classes as necessary to support this program.

Cc: Eugene Anderson, Dean SBA
        Anuj Mehrotra, Vice Dean Graduate Business Programs, SBA

UNIVERSITY OF MIAMI
SCHOOL of BUSINESS
ADMINISTRATION

Department of Marketing P.O. Box 248147 Coral Gables, FL 33124-6554	Phone: 305-284-5935 Fax: 305-284-5326

MEMORANDUM

DATE: October 23, 2013

TO: Richard Williamson
           Chair, Faculty Senate

FROM: A. Parasuraman
           Chair of Marketing Department

SUBJECT: Master of Science in Business Analytics

I am writing to extend my support for the creation of the Master of Science in Business Analytics Program, as approved by the School of Business Administration School Council on October 4th, 2013.

Our department will offer the required and elective Marketing courses as needed for this program.

Cc: Eugene Anderson, Dean SBA
        Anuj Mehrotra, Vice Dean Graduate Business Programs, SBA

UNIVERSITY OF MIAMI
COLLEGE of ENGINEERING

Department of Industrial Engineering
P.O. Box 248294
Coral Gables, Florida 33124-0623

Ph: 305-284-2344
Fax: 305-284-4040
ien@eng.miami.edu

MEMORANDUM

TO: Richard L. Williamson, Ph.D.
Chair, Faculty Senate

FROM: Shihab Asfour, Ph.D.
Professor and Chairman, Department of Industrial Engineering

SUBJECT: Master of Science in Business Analytics

DATE: October 23, 2013

The Department of Industrial Engineering is aware of the proposed establishment of a Master of Science in Business Analytics degree and will aim to accommodate students in the Industrial Engineering courses as described in the proposal.

Cc: Eugene Anderson, Dean, School of Business Administration
Anuj Mehrotra, Vice Dean, Graduate Business Programs

UNIVERSITY OF MIAMI
COLLEGE of ENGINEERING

Electrical and Computer Engineering Department
P.O. Box 248294
Coral Gables, FL 33124

Ph: 305-284-3291
Fax: 305-284-4044
ece.dept.um@miami.edu
www.miami.edu/ece

MEMORANDUM

TO: Richard Williamson, Ph.D.
            Chair, Faculty Senate

SUBJECT: Master of Science in Business Analytics

DATE: October 23, 2013

The Department of Electrical and Computer Engineering is aware of the proposed establishment of a Master of Science in Business Analytics degree and will aim to accommodate students in the Electrical and Computer Engineering courses as described in the proposal.

Sincerely,

Dr. Mohamed Abdel-Mottaleb,
Professor and Chairman
Dept. of Electrical & Computer Engineering

Cc: Eugene Anderson, Dean, School of Business Administration
       Anuj Mehrotra, Vice Dean, Graduate Business Programs

UNIVERSITY OF MIAMI
GRADUATE SCHOOL

M. Brian Blake, Ph.D.
Vice Provost for Academic Affairs
& Dean of the Graduate School

Graduate School
P.O. Box 248125
Coral Gables, FL 33124-3220

Phone: 305-284-4154
Fax: 305-284-5441
graduateschool@miami.edu

MEMORANDUM

DATE: November 20, 2013

TO: Richard Williamson
            Chair, Faculty Senate

FROM: M. Brian Blake, Ph.D.
            Dean, The Graduate School

SUBJECT: Name Change to Master of Science in Business Analytics

The School of Business Administration submitted a proposal to change the name of the Master of Science in Management Science to the Master of Science in Business Analytics. The name change was discussed at the meeting of the Graduate Council on Tuesday, November 19, 2013. The Graduate Council approved the name change and requested the authors to (1) Make sure the Computer Science department is informed of the Business Analytics degree and (2) Allow any student matriculating in the Management Science program (named to be change to Business Analytics) to have the opportunity to change to the newer program with the completion of required courses.

cc: Eugene Anderson, Dean SBA
    Anuj Mehrotra, Vice Dean Graduate Business Programs, SBA
    Office of Planning, Institutional Research and Assessment