MEMORANDUM

To: Julio Frenk, President

From: Tomás A. Salerno
            Chair, Faculty Senate

Date: November 21, 2018

Subject: Faculty Senate Legislation #2018-26(B) – Proposal to Create a Bachelor of Business
Administration Major in Business Analytics, Business School
****

The Faculty Senate, at its November 14, 2018 meeting, voted unanimously to approve the
proposal from the Business School to create a new Bachelor of Business Administration major in
Business Analytics. The Business Analytics undergraduate major is already offered by the
School under the Bachelor of Science in Business Administration (BSBA) degree, but is being
expanded to the Bachelor of Business Administration.

The new degree program will require completion of 120 credit hours including the University's
general education requirements. The curriculum for the major will consist of pre-existing courses
including a graduate level course, MAS 549 Big Data Analytics, which will be developed into an
undergraduate elective option; as well as a new course to be developed as an elective within the
major, MAS 352 Sports Analytics. The major will count toward the STEM Area of Knowledge
of the University's General Education Requirement.

The proposed undergraduate major does not "represent a significant departure, either in content
or method of delivery" from what the University is currently approved to offer by SACSCOC.

The Faculty Senate does not approve budget concepts, therefore no budget information is included
here.

This legislation is now forwarded to you for your action.

TAS/rh

Enclosure

cc: Jeffrey Duerk, Provost and Executive Vice President for Academic Affairs
        John Quelch, Dean of the Business School
        Yongtao Guan, Professor and Chair, Management Science, Business School

CAPSULE: Proposal to Create a Bachelor of Business Administration Major in Business Analytics, Business School

APPROVED: _____ DATE: 12/18/18

(President's Signature)

OFFICE OR INDIVIDUAL TO IMPLEMENT: Dean John Quelch

EFFECTIVE DATE OF LEGISLATION: _____IMMEDIATELY_____

(if other than June 1 next following)

NOT APPROVED AND REFERRED TO: _____

REMARKS (IF NOT APPROVED):_____

UNIVERSITY OF MIAMI

Proposal Submission Checklist

Proposals are to be submitted to the Office of Assessment and Accreditation (OAA), if applicable, the Graduate Council (for graduate programs excluding Law and Medical), if applicable, and the Faculty Senate. Refer to the Procedures for Program Changes document for information on the approvals and notifications needed for program changes and the Proposal Submissions Specifications document for an explanation of the process and a list of the materials required.

(Please note that change approvals can take 2 semesters to complete.)

Include this checklist at the beginning of each proposal.
(Complete the information below, save the form as a pdf, and insert it with the background materials that are specified, in the order listed, and send the package electronically as noted above.)

KEY CONTACT PERSONNEL INFORMATION

First Name

Yongtao

Last Name

Guan

Proponent's Title

Professor and Chair

Department, if applicable

Management Science

School/College

Business

E-mail

yguan@miami.edu

Phone

305-284-2189

Title of Proposal

Establishment of a new BBA Major in Business Analytics

(-continue to next page-)

MANDATORY MEMORANDA AND FORMAT

Please check that each item listed below is included in the proposal package of materials, in the ORDER as listed. The applicable title (i.e. Letter of Explanation, Memo from the Dean, etc.) is to precede each section in the materials.

Only proposals conforming to this format will be accepted.

1. This completed checklist.

2. Letter of explanation. (2-3 pages only, double spaced, 12 pt font)

⊙ Yes   ○ No

If no, explain why:

3. A memo from the dean(s) signifying approval of the faculty of the relevant School(s) / Colleges(s).

⊙ Yes   ○ No

If no, explain why:

4. A memo that all affected or relevant School / College Council(s) have approved.

⊙ Yes   ○ No

If no, explain why:

5. A memo from the department chair(s) signifying approval of the faculty of the relevant department(s).

⦿ Yes   ◯ No

If no, **explain why:**

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6.   A memo from the Office of Accreditation and Assessment (OAA) if the proposal involves academic programs (degrees, certificates, majors, minors, concentrations, specializations, tracks, etc.) such as new programs, closing programs, or program changes (such as changes in requirements, program length, modality, name, location).

(To be submitted by OAA to the Graduate Council or the Faculty Senate, as appropriate.)

⦿ Applicable   ◯ Not applicable.

If not, **explain why:**

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7.   A memo from the Graduate School Dean signifying approval of the Graduate Council (for graduate programs only).
(To be submitted to the Faculty Senate by the Graduate Council.)

◯ Applicable   ⦿ Not applicable.

If not, **explain why:**

This proposal is concerning only the undergraduate program.

8. **Academic Deans Policy Council (ADPC) approval, for interdisciplinary issues and as appropriate. Please consult with the Dean of the Graduate School or the Secretary of the Faculty Senate to check if this is needed.**

◯Yes   ⦿No

If no, explain why:

This proposal does not have any interdisciplinary component involved.

9. Additional required documents as listed on the "Proposal Submissions Specifications," i.e. market analysis, budget information, assessment of library collections, etc. as specified.

List additional documents included:

Proposal with appendices

FORM INSTRUCTIONS:
1. Once you have completed the form, save it to your computer by clicking the "Save" button below.
2. Print and scan it.
3. Submit the scanned version to facsen@miami.edu with your proposal. **Please note:** only scanned versions can be accepted.

Save

End form.

MEMORANDUM

TO: **Tomás Salerno**
Chair, Faculty Senate

FROM: **Yongtao Guan, Chair**
Management Science Department

SUBJECT: **BBA Major in *Business Analytics***

DATE: **October 24, 2018**

The Management Science (MAS) department propose a new Bachelor of Business Administration in Business Analytics major. The proposal was approved by MAS faculty on October 19th. See the included proposal for details.

Letter of Explanation

The Management Science faculty propose adding a BBA in Business Analytics to the Miami Business School undergraduate degree offerings. The proposed major if approved would help address a long-standing problem that BBA students cannot pick Business Analytics as their major, despite the growing importance of analytics in virtually all industry sectors and the fact that the vast majority of our undergraduate students are BBA students. At this time, the Management Science Department is the only department in the Miami Business School not offering a BBA degree. The faculty believes that there would be significant student demand for this program, due in large part to the growing interest in the area of analytics. Moreover, it will provide our most talented BBA students a boost for their future career developments. We intend to admit only the most talented students into the major. Specifically, a BBA student can declare Business Analytics as his/her major only if he/she has achieved at least *a **minimum** A- average* for MTH161, MAS 201 and MAS 202, which are foundation courses for analytics.

We have designed our curriculum based on our first-hand knowledge gained from working closely with our industry partners involving our MS in Business Analytics program. In addition, we have carefully studied the curricula of four similar programs offered by business schools at aspirational peer institutions, namely, Arizona State University, Indiana University, Rutgers and University of Iowa (see Appendix A for their curricula). We believe that our proposed curriculum is up-to-date, rigorous and appropriate for qualified BBA students.

Besides the differences in the BBA and BSBA degrees, the following table highlights the key differences between the proposed major from the existing major BSBA in Business Analytics.

Course	BSBA in Business Analytics	BBA in Business Analytics
MTH 162	Required by degree	N/A
BTE 320	Required by degree	One of 5 major choice courses
MAS 332 Data Acquisition, Preparation and Visualization	Required	Required
MAS 342 Introduction to Optimization and Decision Making	Required	Required
MAS 432 Data Analysis	Required	Required
MAS 442 Stochastic Models in Operations Research	Required	N/A
MAS 547 Computer Simulation Systems	Select at least one of MAS 547 and MAS 548	N/A
MAS 548 Data Mining and Knowledge Acquisition	Select at least one of MAS 547 and MAS 548	One of 5 major choice courses
MAS 5xx Business Analytics Capstone	Required	N/A

Because we attract only the most talented BBA students by imposing the minimum grade requirement as explained previously and by reserving three courses (i.e., MAS 442, MAS 547 and the capstone course) only for the BSBA major, *we are not watering down the rigor in our BSBA major*. The data analytics courses shared by the two majors (i.e., MAS 332 and 432) focus more on coding, model building and interpretation of results and do not require more advanced quantitative skills than as required by the BBA degree. A course similar to MAS 342 which is also shared by the two majors has been successfully taught at the graduate level to both former BBA and BSBA students.

The proposed major and the existing major BSBA in Business Analytics are *two different brands* just like the BBA degree and the BSBA degree are two different brands. As such we do not believe that the proposed will dilute our existing brand. Because of the differences in the curricula as illustrated previously, the BBA and BSBA students in Business Analytics are clearly expected to master different levels of skills in business analytics.

Students completing the Bachelor of Business Administration in Business Analytics will:

1. Use statistical software to acquire, manipulate, visualize, and analyze data.

2. Develop and use predictive models.

3. Develop and use decision models.

4. Effectively communicate complex analytical findings to stakeholders.

Assessment of these learning outcomes will be based on questions embedded in tests and projects taken in courses in the major. Additional assessment will be based on the student's projects and presentations, according to uniform scoring rubrics. These may be supplemented by measures incorporated into the Senior Exit Exam and from questions on the University-administered Graduating Senior Survey. Further details are provided in the Appendix D.

Curriculum Requirements

Major Area of Specialization in Business Analytics (STEM)

The Department of Management Science offers a major area of specialization in Business Analytics for students pursuing the Bachelor of Business Administration degree (BBA).

In addition to satisfying the University General Education Requirements and Electives, students pursuing the BBA in Business Analytics must complete the BBA Business Core and the specific coursework for Business Analytics major area of specialization as follows:

University General Education Requirements   **24 credits**

(NOTE: An additional 9 credits within the major will also count toward the STEM Area of Knowledge general education requirement for a total of 33 credits of general education.)

Electives   **23 credits**

BBA Business Core Requirements   **52 credits**

    See Appendix B

Quantitative course choice outside Management Science   **3 credits**

ECO 430	Applied Econometrics
ECO 444	Game Theory in Economic Applications
FIN 303	Intermediate Financial Management
FIN 320	Investment and Security Markets
MGT 445	Supply Chain Modeling and Analytics
MGT 446	Supply Chain Strategy
MKT 302	Marketing Research and Market Analysis
MKT 387	Digital Marketing
MKT 389	Fundamentals of Digital Marketing Analytics

Major Area of Specialization   9 credits

    MAS 332   Data Acquisition, Preparation and Visualization

| MAS 342 | Introduction to Optimization and Decision Making |
| MAS 432 | Data Analysis |

Major choice courses   **9 credits**

BTE 320	Introduction to Programming
BTE 423	Database Management Systems
MAS 352	Sports Analytics
MAS 548	Data Mining and Knowledge Acquisition
MAS 549	Big Data Analytics

TOTAL CREDITS   **120 credits**

Appendix A

Curriculum for Business Data Analytics at Arizona State University

Critical Courses
WPC 101: Student Success in Business (1)
CIS 235:   Introduction to Information Systems (3)
Required Courses for Business Data Analytics
CIS 315:   Introduction to Business Data Analytics (3)
ACC 241: Uses of Accounting Information II (3)
CIS 355:   Business Data Warehouses and Dimensional Modeling (3)
CIS 375:   Business Data Mining (3)
CIS 415:   Big Data Analytics in Business (3)
CIS 450:   Enterprise Analytics (3)

Curriculum for Business Analytics Co-Major at Indiana University

Required Courses (12 Credit Hours)
K327 Deterministic Models in Operations Research
G350 Business Econometrics
K353 Business Analytics and Modeling
G492 Predictive Analytics for Business Strategy
Elective Courses (3 Credit Hours)
F335 Security Trading and Market Making
F408 Real Options and Strategic Capital Investment
F420 Equity and Fixed Income
F421 Derivative Securities and Corporate Risk Management
M346 Analysis and Display of Marketing Data
M455 Topic: CRM and Digital Analytics
A437 Advanced Management Accounting
G303 Game Theory for Business Strategy
P481 Supply Chain Planning and Analytics
S326 Web and Social Media Analytics

Curriculum for Business Analytics and Information Technology at Rutgers University

Required Courses (12 credits)
Foundations of Business Programming (3)
Time Series Modeling for Business (3)
Business Data Management (3)
Business Decision Analytics under Uncertainty (3)
Electives (9 Credits)
Group 1
Data Mining for Business Intelligence (3)
Enterprise Architecture (3)
Information System Security (3)
Large-Scale Business Data Analysis (3)
Optimization Modeling (3)
Risk Modeling (3)
Introduction to ERP (3)
Group 2
Group 2 contains a long list of courses, at most 2 courses may be selected

Curriculum for Business Analytics and Information Systems at University of Iowa

Major Common Required Courses
MSCI:3030 Business Process Analysis (3)
MSCI:3050 Business Analytics and Information Systems Professional Preparation (1)
MSCI:3200 Database Management (3)
Required Track Courses for Business Analytics
MSCI:3250 Analyzing Data for Business Intelligence (3)
MSCI:3500 Data Mining (3)
MSCI:3800 Optimization and Simulation Modeling (3)
MSCI:4150 Business Analytics Capstone (3)
Required Electives (choose 3)
MSCI:3025 VBA Spreadsheet Programming (3)
MSCI:3100 Accounting Information Systems (3)
MSCI:3920 Supply Chain Management (3)
MSCI:4220 Advanced Database Management and Big Data (3)
MSCI:4280 Data Security (3)
CS:1210   Computer Science I: Fundamentals (4)
ECON:3355 Economic and Business Forecasting (3)
MKTG:3102 Marketing Analytics (3)
Any computer science course for which CS:1210 is a prerequisite
Any course required for the non-selected track

Appendix B

BBA Business Core Requirements [1]

ACC 211	Principles of Financial Accounting	3
ACC 212	Managerial Accounting	3
BSL 212	Introduction to Business Law	3
BTE 210	Fundamentals of Business Technology and Innovation	3
BUS 101	First Step: Freshman Integrity, Responsibility, and Success through Teamwork	3
BUS 150	Business Analytics	3
BUS 300	Critical Thinking and Persuasion for Business [3]	3
ECO 211	Principles of Microeconomics (Microeconomics)	3
ECO 212	Principles of Macroeconomics (Macroeconomics)	3
FIN 302	Fundamentals of Finance	3
MTH 161	Calculus I	4

MAS 201	Introduction to Business Statistics (minimum grade of C- required)	3
MAS 202	Intermediate Business Statistics	3
MGT 303	Operations Management	3
MGT 304	Organizational Behavior	3
MGT 401	Strategic Management (must be taken in the final semester)	3
MKT 201	Foundations of Marketing	3
or MKT 301	Marketing Foundations	

Appendix C

Quantitative Choice Courses – select one course from below   **3 credits**

ECO 430. Applied Econometrics. 3 Credit Hours.

This course introduces basic econometric techniques for analyzing economic data. The goal
is to make students sophisticated consumers and skilled producers of empirical analysis,
which will be attained by extensive work on a variety of real-world data like students' test
scores, CEO wages, mortgage applications, cigarette demand, stock market capitalization,
inflation, GDP and interest rates. Learning how to use econometric analysis software is an
integral part of the course.
Prerequisite: ECO 211 and MAS 110, or MTH 130 or MTH 141 or higher.

ECO 444. Game Theory in Economic Applications. 3 Credit Hours.

This course is an introduction to the techniques and questions of modern microeconomics.
The course will expose you to the techniques of game theory, t he workhorse of modern
microeconomics, and will apply those techniques to the analysis of a variety of economics
situations and institutions.
Prerequisite: MAS110 or MTH 130 or MTH 141 or higher.

FIN 303. Intermediate Financial Management. 3 Credit Hours.

This course provides an overview of financial decision-making by corporations. Building on
topics covered in the introductory finance classes, this course develops the foundations of
optimal financial policy and applies these principles to corporate financial decision-making
including capital structure, capital budgeting, dividend policy, leasing, securities issuance
and the role of investment banks, and mergers and acquisitions. Note: a student must have
obtained a B o r higher grade in FIN302 to major in Finance. Earning an A in this class or

any other class or classes does not eliminate that requirement.

Prerequisite: FIN 302.

FIN 320. Investment and Security Markets. 3 Credit Hours.

This course introduces students to both practical and theoretical aspects of investment with an emphasis on financial markets. Topics include valuation of financial securities such as stocks, bonds and options; modern portfolio theory; the process and institutional characteristics of investing. Note that this course does not address the details of individual security valuation and selection, i.e., this course is not about stock picking or about how to get rich by investing in the markets. Instead, this course attempts to help you develop a lasting conceptual framework in which to view the investment process and to analyze future ideas and changes in investment environment. This class is essential to any student considering a finance concentration. Note: A student must have obtained a B or higher in FIN302to major in Finance. Earning an A in this class or any other class or classes does not eliminate this requirement.

Prerequisite: FIN 302.

MGT 445. Supply Chain Modeling and Analysis. 3 Credit Hours.

This course will introduce students to managerial decision problems in modern s upply chains, and will develop structured mathematical tools to model and solve these problems. Students will also learn to apply these tools through problem -solving exercises, experiential games, and spreadsheet-based case studies.

Prerequisite: MGT 303.

MGT 446. Supply Chain Strategy. 3 Credit Hours.

This course will deal with issues such as inventory management, supply chain de sign/coordination, revenue management, and sourcing. Each module discusses how a real company practices some aspect of supply chain strategy, and then review s the concepts

behind that practice. Tools are provided to analyze the concept s, distill their principles, and suggest guidelines for implementation and improvement.

Prerequisite: MGT 303.

MKT 302. Marketing Research and Market Analysis. 3 Credit Hours.

Examination of the process, role, and function of marketing research, including research problem formation, research methods and procedures, data acquisition, sampling theory and practice, data analysis, presentation of results, ethical issues, and application for each of the above.

Prerequisite: MKT 201 or MKT 301 and MAS 202 or MAS 312 and Requisite: Business School.

MKT 387. Digital Marketing. 3 Credit Hours.

This course will introduce students to the principles of digital marketing from both perspectives of theory and practice. On the theory side, students will learn foundations and recent research and development of digital marketing. Main contemporary digital marketing issues will be extensively discussed in class, including search engine optimization, search engine marketing, online advertising, web analytics, email marketing, social media marketing, and reputation management. Students will also learn how to form an appropriate strategy for a digital marketing campaign and use quantitative skills to analyze the effectiveness of such a campaign. On the practice side, students will collaborate in teams and participate in applied learning exercises. Students will grasp critical concepts of search engine optimization by working with a local business client, laying out a suitable pre-campaign strategy, implementing and modifying the campaign in real time, and summarizing the campaign results in a meaningful and concise manner when it is over.

Prerequisite: MKT 201 or MKT 301.

MKT 389. Fundamentals of Digital Marketing Analytics. 3 Credit Hours.

This course introduces the student to the basics of evolving new media business metrics and corresponding forms of audience and competitive marketplace analysis. Students will research and evaluate business models for multiplatform new media products that use any combination of print, radio, television, internet, or mobile technologies. Product evaluations will be set within the context of comparative media economics, new media market dynamics, and advertising revenue projections. The goal will be to evaluate whether an existing or a current media product has the critical mass required for profitable advertiser metrics. Students will be exposed to developing new media usage patterns, cross platform media support strategies, new models of entertainment and news gathering, and corporate media acquisitions and mergers. Local media executives, and entrepreneurs will be invited to class to review current trends and discuss strategies for success.
Prerequisite: MKT 201 or MKT 301.

Major Area of Specialization in Business Analytics   9 credits

MAS 332. Data Acquisition, Preparation and Visualization. 3 Credit Hours.

This course provides an in depth view of working with data to extract and present valuable information. Students will learn to collect, clean, manipulate, analyze, and visualize data from various sources correctly and efficiently. Through hands-on application, students will gain an understanding of what problems can occur when dealing with a variety of data and what solutions exist. Computing is a major component of this course, and students will learn a number of in-demand technical skills.
Prerequisite: MAS 202 or MAS 312

MAS 342. Introduction to Optimization and Decision Making. 3 Credit Hours.

Introduction to deterministic mathematical models with applications to business problems. Topics include the methodology of operations research, linear, integer, and dynamic

programming, project management, networks, multi-objective optimization and heuristics. Software packages are used for programming applications. Lecture, 3 hours.
Prerequisite: MAS 201 or MAS 311 or permission of instructor

MAS 432. Data Analysis. 3 Credit Hours.

This course introduces students to the analysis of various data types, with an emphasis on interpreting and communicating result. The course begins with linear regression modeling of normally distributed outcomes, and extends the concepts to other important data types frequently encountered in practice. Students will gain a firm understanding of a wide range of statistical models, when each is appropriate, and how to implement, interpret, and communicate results.
Prerequisite: MAS 202 or MAS 312 or permission of instructor

Major Choice Courses - Select three courses from below   9 credits

BTE 320. Introduction to Programming. 3 Credit Hours.

This course covers the fundamentals of programming logic and structured programming principles—including problem solving, algorithm design, and program development—using a high level programming language. Topics covered include fundamentals of algorithms, flowcharts, problem solving, programming concepts, classes and methods, control structures, arrays, and strings, pointers, and data structures.
Requisite: Miami Business School or BTE Minor or CSC Major or Minor.

BTE 423. Database Management Systems. 3 Credit Hours.

This course covers the foundations of database management systems (DBMS). Topics include: database systems design, SQL, the relational model, entity-relationship modeling, distributed DBMS, object DBMS, web technology and DBMS, semi-structured data, XML, business intelligence, data warehousing, data warehousing design, introduction to OLAP, and

a brief overview of data mining. Students will engage in hands-on exercises for the design and implementation of database business applications.

Prerequisite: BTE 320.

MAS 352. Sports Analytics

In this course students investigate questions that sports organizations face in business operations (ticketing, pricing, sales, and finance), and in team operations (scouting, coaching, and player personnel). Students will learn statistical and machine learning techniques such as mixed-effects regression models, random forests, neural networks, clustering, and support vector machines. Focus of the course will be on data management, data visualization, predictive modeling, forecasting, as well as written and verbal communication of the results of analysis. The programming language R will be used extensively in this course.

Prerequisite: MAS 332

MAS 548. Data Mining and Knowledge Acquisition. 3 Credit Hours.

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.

Prerequisite: MAS 432

MAS 549. Big Data Analytics

As firms have the ability to access and store large amounts of customer and business data, they are faced with the complexities associated with Big Data. This class will discuss the challenges and potential solutions in working with Big Data through use cases and applications. Hands-on tools and methodologies that are needed when handling, visualizing, and/or analyzing Big Data to solve business critical questions will be presented.

Prerequisite: MAS 332 and MAS 432

Appendix D

Assessment of Student Learning Outcomes

Student Learning Outcome 1: Use statistical software to acquire, manipulate, visualize, and analyze data.

- Assessment Method 1: Embedded questions in projects and exams in MAS 332.
- Assessment Method 2: Project and oral presentation, assessed with a common rubric.

Student Learning Outcome 2: Develop and use predictive models.

- Assessment Method 1: Embedded questions in projects and exams in MAS 432.
- Assessment Method 2: Project and oral presentation, assessed with a common rubric.
- Assessment Method 3: Targeted questions on the Senior Exit Exam.

Student Learning Outcome 3: Develop and use decision models.

- Assessment Method 1: Embedded questions in project and exams in MAS 342.
- Assessment Method 2: Project and oral presentation, assessed with a common rubric.
- Assessment Method 3: Targeted questions on the Senior Exit Exam.

Student Learning Outcome 4: Effectively communicate complex analytics findings to stakeholders.

- Assessment Method 1: Projects undertaken in courses taken throughout the program.
- Assessment Method 2: Project and oral presentation, assessed with a rubric.

MIAMI
BUSINESS SCHOOL

MEMORANDUM

TO: Tomás Salerno
          Chair, Faculty Senate

FROM: John Quelch
          Dean

SUBJECT: **BBA Major in** *Business Analytics*

DATE: **October 24, 2018**

This memorandum is intended to memorialize my support for the establishment of a Bachelor of Business Administration in Business Analytics major to compliment the extant undergraduate majors in the Miami Business School (MBS). This proposal has broad support from the faculty of the School, and it sits squarely in the School's strategy for business education.

The new major program was unanimously approved by the School of Business's School Council on behalf of the MBS faculty October 19, 2018.

I enthusiastically support the approval of this major and look forward to continuing to work with the Faculty Senate regarding this and other initiatives.

MIAMI
BUSINESS SCHOOL

TO: University of Miami Faculty Senate

FROM: School Council of the Miami Business School
Blanca I. Ripoll, Secretary

SUBJECT: Proposal for a new BBA in Business Analytics Major

DATE: October 29, 2018

This memo affirms that the proposal for a new BBA in Business Analytics major was unanimously approved by the School Council of the Miami Business School on Friday, October 19, 2018.

BIR:

UNIVERSITY
OF MIAMI

Assessment and Accreditation
Gables One Tower 1320 S Dixie Hwy
Coral Gables, Florida 33146

Phone: 305-284-5120
Fax: 305-284-4929
oaa miami edu

MEMORANDUM

DATE: 10/25/2018

TO: Yongtao Guan, Chair of Management Science Department
                 Miami School of Business

FROM: Patty Murphy, Executive Director *PBM*
                 Office of Assessment and Accreditation

RE: New Undergraduate Business Analytics Major in BBA Program

On October 24, 2018, the Miami School of Business notified my office of its intent to an undergraduate major in Business Analytics in the existing Bachelor of Business Administration (BBA) degree program effective Fall 2019. The School already offers an undergraduate major in Business Analytics in its Bachelor of Science in Business Administration (BSBA) degree program [Academic Plan Code: BUAN_BSBA) but are expanding it to the BBA program with a slightly different focus.

The proposed BBA in Business Analytics program will require completion of 120 credit hours including the University's general education requirements. The curriculum for the new major will consist predominantly of existing courses but one new course will be developed as an elective in the major, MAS 352 Sports Analytics, and one course already offered at the graduate level will be developed into an undergraduate elective option, MAS 549 Big Data Analytics. The new major will require 21 credits of course work as follows:

- Three required courses in Management Science (9 credits):
    - MAS 332 Data Acquisition, Preparation and Visualization (existing course)
    - MAS 342 Introduction to Optimization and Decision Making (existing course)
    - MAS 432 Data Analysis (existing course)
- Three electives within the major from the following courses (9 credits):
    - BTE 320 Introduction to Programming (existing course)
    - BTE 423 Database Management Systems (existing course)
    - MAS 352 Sports Analytics (new course)
    - MAS 548 Data Mining and Knowledge Acquisition (existing course)
    - MAS 549 Big Data Analytics (new course)
- One quantitative course outside Management Science from the following courses (3 credits):
    - ECO 430 Applied Econometrics (existing course)
    - ECO 444 Game Theory in Economic Applications (existing course)
    - FIN 303 Intermediate Financial Management(existing course)
    - FIN 320 Investment and Security Markets (existing course)
    - MGT 445 Supply Chain Modeling and Analytics (existing course)
    - MGT 446 Supply Chain Strategy (existing course)
    - MKT 302 Marketing Research and Market Analysis (existing course)

- o MKT 387 Digital Marketing (existing course)
- o MKT 389 Fundamentals of Digital Marketing Analytics (existing course)

The program will be overseen by Dr. Yongtao Guan. Dr. Guan is a professor of Management Science and chair of the Management Science department. He is also the director of the Deloitte Institute for Research and Practice in Analytics. He has a PhD in Statistics from Texas A&M University. He also oversees the existing undergraduate major in Business Analytics for the BSBA program.

This major will count toward the STEM Area of Knowledge of the University's General Education Requirement. The CIP Code for the new major will be 52.1302 Business Statistics. This CIP Code qualifies this program for the Department of Homeland Security's STEM designation for the OPT visa extension program.

The new undergraduate major does not "represent a significant departure, either in content or method of delivery" from what we are currently approved by SACSCOC to offer due to the following:

- The proposal involves adding an existing major to another existing degree offered by the University. The University is already approved to offer the major and the degree.
- The program length for the new bachelor's degree program meets the SACSCOC requirement of a minimum of 120 credit hours.
- The proposed degree requirements include 33 credit hours of general education which meets the SACSCOC requirement of a minimum of 30 credit hours.
- The new major will be composed of mostly of existing courses, although two new courses will be added to provide more elective options. The new courses do not represent a significant change in content from already existing courses.
- The new major will be supported by current qualified faculty. No new faculty will be hired to support the program.
- The program will be overseen by a qualified faculty member, Dr. Yongtao Guan.
- The University is currently approved to offer the following programs in the same area:
  - o Undergraduate minor in Business Analytics
  - o Bachelor of Science in Business Administration in Business Analytics
  - o Master of Science in Business Analytics
- The majority of the program will not be offered via distance education and, in any case, the University is approved to offer 100% distance education programs.
- The program will be offered on the University's Coral Gables campus.

SACSCOC only requires notification of new programs that represent a significant departure from our current programs. Therefore, no notification to or approval from SACSCOC is required for this change.

Please contact me if you have any questions at pattymurphy@miami.edu or (305) 284-3276.

CC: Faculty Senate
       John Quelch, Dean, Miami School of Business
       Ann Olazabal, Vice Dean, Undergraduate Business Education, Miami School of Business
       Karen Beckett, University Registrar
       Carrie Glass, Executive Director, Student Financial Assistance and Employment