

**EXECUTIVE COMMITTEE  
SCHOOL OF BUSINESS ADMINISTRATION  
REPORT TO THE RIVERSIDE DIVISION  
MAY 29, 2018**

To be adopted:

Add Business Analytics Concentration to Business Administration Major (BSAD)

**PRESENT:**

**PROPOSED:**

Business Administration Major

[No Change]

1.Preparation for Business Administration major  
(8 courses [at least 32 units])

[No Change]

Major prerequisites (non-BUS courses may be  
used to satisfy breadth requirements for the  
School of Business Administration):

[No Change]

(1) BUS 010

(2) BUS 020

(3) ECON 002

(4) ECON 003

(5) CS 008

(6) STAT 048

(7) MATH 022

(8) ECON 102 or ECON 103

The major requirements for the B.S. in Business  
Administration are as follows:

[No Change]

2.Upper-division major requirements (18 courses  
[at least 72 units])

[No Change]

Core courses (at least 10 courses [at least 40  
units]):

[No Change]

BUS 100W, BUS 101, BUS 102, BUS 103, BUS  
104/STAT 104, BUS 105, BUS 106/ ECON 134,  
BUS 107, BUS  
108, BUS 109

Concentration (At least 20 units): Students in the  
Business Administration major (BSAD) will be  
required to declare a concentration at least three  
quarters prior to graduation, provided they be  
allowed to change their concentration, if justified.  
The Office of Undergraduate Business Programs  
will manage the process. Students can declare  
one concentration.

[No Change]

Choose five courses from one of the  
concentrations listed below. Courses completed

to meet upper division core requirements may not be used to meet concentration requirements.

Accounting and Auditing: BUS 154, BUS 160/ECON 160, BUS 161, BUS 162/ECON 162, BUS 165A, BUS 165B, BUS 165C, BUS 166, BUS 167, BUS 168A, BUS 168B, BUS 169A, BUS 169B, BUS 170

[No Change]

Business Analytics: BUS 123, BUS 124, BUS 125, BUS 130, and at least one of the following: BUS 117, BUS 129, BUS 136, BUS 161

Finance: BUS 132 and at least four of the following: BUS 131, BUS 134, BUS 135, BUS 136, BUS 137, BUS 138, BUS 139, BUS 140E, BUS 147.

[No Change]

Information Systems: BUS 125, BUS 128, BUS 171, BUS 172, BUS 173, BUS 174, BUS 175

[No Change]

Management: BUS 143, BUS 144, BUS 145, BUS 146, BUS 147, BUS 148, BUS 149, BUS 150, BUS 154, BUS 155, BUS 156, BUS 157, ANTH 105/BUS 158, BUS 173

[No Change]

Marketing: BUS 111, BUS 112, BUS 113, BUS 114, BUS 115, BUS 116, BUS 117, BUS 118, BUS 119, BUS 124, BUS 126

[No Change]

Operations and Supply Chain Management: BUS 122, BUS 123, BUS 124, BUS 125, BUS 126, BUS 127/STAT 127, BUS 128, BUS 129, BUS 130, BUS 173

[No Change]

An additional 3 courses (at least 12 units) of Business Administration elective courses from BUS 111-BUS 199H, excluding BUS 190. Courses completed to satisfy the five- course concentration requirement may not be used to meet this requirement. Related courses outside of Business Administration may be approved to satisfy their requirement with the approval of the Associate Dean or Assistant Dean of Undergraduate Student Affairs of SoBA.

[No Change]

## **Justification:**

Business Analytics (BA) is an emerging area that uses data and mathematical approaches to improve decision making and performance in business. With increasing availability of business data and computing power, the need for the talent in BA has grown dramatically in recent years. According to the McKinsey Global Institute report (2016), the US is facing a great talent shortage in Business Analytics, and that shortage is expected to continue. To address this shortage, many business schools have offered Business Analytics major or concentration.

The UCR School of Business Administration (SoBA) proposes to offer the Business Analytics concentration in the fall of 2018. Our curriculum is designed based the benchmark study against ten top business schools. In particular, the core courses are designed to provide rigorous training in the fundamental tools and techniques of business analytics, whereas the electives provide interdisciplinary applications in specific functional areas. The rigor of the curriculum will prepare students for careers such as business analyst and consultant, in supply chain, finance, operations, and marketing areas.

The main aims and objectives for the BA concentration are as follows.

- Offer rigorous training in business analytics to highly capable students, and serve corporations and communities in Southern California
- Increase job placements, average salary, and training of UCR alumni
- Help maintain and build critical mass of faculty in Business Analytics and related fields
- Enhance the reputation of SoBA and UCR by enhancing the breadth and depth of the choices

Per SoBA's undergraduate committee (UG) request, the OSCM area has conducted a benchmark study comparing our curriculum to that of the benchmarked universities. It found that many universities have been already offering a BA concentration/major. For example:

- MIT offers an undergraduate degree in Business Analytics, which is a mixture of topics traditionally taught in Operations Research/Management that includes Statistics and Data Analysis. (<http://mitsloan.mit.edu/undergrad/15-2-business-analytics>).
- Arizona State University: <https://wpcarey.asu.edu/undergraduate-degrees/business-data-analytics>
- University of Iowa: <https://admissions.uiowa.edu/academics/business-analytics-information-systems>
- National University of Singapore: <https://bschool.nus.edu.sg/analytics-operations>
- University of Miami: <http://bulletin.miami.edu/undergraduate-academic-programs/business/management-science/management-science-bsba/>
- The University of Kansas: <https://business.ku.edu/degree-programs/undergraduate/bsb/business-analytics>
- University of Tennessee: <http://bas.utk.edu/academic-programs/bachelors/business-analytics/default.asp>
- Drexel University: <http://www.lebow.drexel.edu/academics/undergraduate/areas-of-study/business-analytics>

The benchmark study examined the following ten universities in detail: University of California-Irvine, University of California-Berkeley, University of Southern California, Massachusetts Institute of Technology, New York University, Pennsylvania State University, University of Texas-Dallas, Indiana

University, University of Michigan, and University of North Carolina. The study reveals that a vast majority of the benchmarked universities offer either a major or concentration in Business Analytics. In all the universities we considered, such major/concentration is offered and managed by the equivalent of the OSCM area.

SoBA is well-positioned to deliver the BA concentration. (i) For the interdisciplinary applications of business analytics, the majority of professors do empirical research, using statistical analysis to answer business questions. Many of them have taught the applications of business analytics in specific areas, such as operations, marketing, and finance. (ii) For the foundation of business analytics, the OSCM area is uniquely positioned to deliver the core curriculum, including statistical tools, optimization techniques, decision analysis, and programming languages. Indeed, our current curriculum already includes several courses fundamental to business analytics, e.g., BUS 124 (Business Analytics), BUS 125 (Simulation for Business), and Bus 126 (Practical Business Forecasting). In addition, the OSCM area is working on revamping our undergraduate concentration (and hopefully future major). This includes revising content of current courses and introducing new ones such as a programming course suited for business students.

As a result of this benchmark study, we propose a Business Analytics Concentration.

**Approvals:**

Approved by the Executive Committee from the School  
of Business Administration on:

February 27, 2018

Approved by the Committee on Educational Policy:

April 11, 2018