2019-2020 NJCU Senate C&I Committee

October 21, 2019 Report

Dr. Michael Rotenberg-Schwartz, Chair

 Dr. Pablo Garofalo

 Dr. Graig Klein

Dr. Joseph Moskowitz

Ms. Ruth Ortiz

Dr. Lilliam Rosado

I. The committee approved the following course proposals pending minor edits:

1.

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| Course Initiator | Xiaodi Zhu |
| Originating Department | Finance and Real Estate |
| Course Title | **Statistical and Mathematical Foundations for Business Analytics and Data Science** |
| Catalog Description | This course provides basic mathematical knowledge relevant to data science and data analytics. Such knowledge will provide the foundation of data analytical models. Students can better understand the algorithms and further implement them on practical problems with mathematical foundation. This course will also support other courses in the BS of Data Science program. |
| Credits | 3 cr. |
| Component Workload Hours | Lecture, 3 credits |
| Course Level | 300  |
| Prerequisites | FINC 305 |
| Degree Requirements | None |
| Enrollment | 1 section every year; 25 students maximum enrollment per section |

 2.

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| Course Initiator | Li Xu |
| Originating Department | Finance and Real Estate |
| Course Title | **Programming Basics for Business Analytics and Data Science**  |
| Catalog Description | In this course students will be introduced to the Python programming language, which is the widely used programming language in the field of data science. Students will get a good understanding of using Python for statistical modelling and machine learning. |
| Credits | 3 cr. |
| Component Workload Hours | Lecture, 3 credits |
| Course Level | 400  |
| Prerequisites | AUR math, Math 164, MGMT 203 or equivalent |
| Degree Requirements | Required for BS in Business Analytics and Data Science |
| Enrollment | 1 section a year; 20 students maximum enrollment per section |

 3.

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| Course Initiator | Xiaodi Zhu |
| Originating Department | Finance and Real Estate |
| Course Title | **Basics of Data Collection, Data Warehousing and Data Cleansing** |
| Catalog Description | This course will provide students with an overview of data management process, including data format and structure, collection, storage, and cleansing. Students will be exposed to various techniques required for collecting data from different sources, storing and accessing data, and cleansing data. |
| Credits | 3 cr. |
| Component Workload Hours | Lecture, 3 credits |
| Course Level | 400 |
| Prerequisites | FINC 305, FINC 4XX: Programming Basics for Business Analytics and Data Science |
| Degree Requirements | Elective for Finance, Marketing, and Management majors |
| Enrollment | 1 section a year; 25 students maximum enrollment per section |

4.

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| Course Initiator | J.D. Jayaraman |
| Originating Department | Finance and Real Estate |
| Course Title | **Principles of Machine Learning** |
| Catalog Description | This course will provide students with a thorough understanding of machine learning concepts. Students will learn the common algorithms used in machine learning and will be able to implement them in R or Python. Students will learn how to apply machine learning algorithms to detect patterns in the data and to predict outcomes. |
| Credits | 3 cr. |
| Component Workload Hours | Lecture, 3 credits |
| Course Level | 400 |
| Prerequisites | FINC 305, FINC 4XX: Programming Basics for Business Analytics and Data Science or equivalent |
| Degree Requirements | Required for BS in Data Science |
| Enrollment | 1 section a year; 25 students maximum enrollment per section  |

5.

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| Course Initiator | Li Xu |
| Originating Department | Finance and Real Estate |
| Course Title | **Introduction to Forecasting Models and Experimental Design for Business Analytics and Data Science** |
| Catalog Description | This course will provide students with a thorough understanding of regression analysis. It covers both the theory and application of regression analysis. This course will also provide students with a basic understanding of experimental design and help students develop the skills to efficiently and effectively design and analyze experiments. |
| Credits | 3 cr. |
| Component Workload Hours | Lecture; 3 credits |
| Course Level | 400 |
| Prerequisites | FINC 3XX: Statistical and Mathematical Methods for Business Analytics and Data Science |
| Degree Requirements | Required for BS in Business Analytics and Data Science |
| Enrollment | 1 section a year; 20 students maximum enrollment per section |

6.

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| Course Initiator | Marguerite Griffin and Lukas Helikum |
| Originating Department | Accounting |
| Course Title | **Data Analytics for Accountants** |
| Catalog Description | Students will learn how to transform big data into insights. Students will learn how they can solve problems using big data sets. They will be taught the framework for data analysis and will use tools such as Excel, Micosoft Power BI, R and Tableau for data analysis and data visualization. |
| Credits | 3 cr. |
| Component Workload Hours | Lecture, 3 credits |
| Course Level | 300 |
| Prerequisites | ACCT 251: Financial Accounting |
| Degree Requirements | ??? |
| Enrollment | 1 section a semester; 25 students maximum enrollment per section |

7.

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| Course Initiator | J.D. Jayaraman |
| Originating Department | Finance and Real Estate |
| Course Title | **Capstone Project in Business Analytics and Data Science** |
| Catalog Description | This course is the culmination of the BS in Business Analytics and Data Science program. The student produces work that demonstrates mastery of the curriculum. The form of the work can be a capstone project, or other work deemed suitable by the faculty advisor. |
| Credits | 3 cr. |
| Component Workload Hours | Lecture, 3 credits |
| Course Level | 500 |
| Prerequisites | FINC 305, FINC 3XX: Statistical and Mathematical Foundations for Business Analytics and Data Science, FINC 4XX Programming Basics for Business Analytics and Data Science, FINC 4XX: Basics of Data Collection, Data Warehousing and Data Cleansing, FINC 4XX: Introduction to Forecasting Models and Experimental Design for Business Analytics and Data Science, FINC 4XX: Fundamentals of Data Visualization for Business Analytics and Data Science, FINC 4XX: Principles of Machine Learning |
| Degree Requirements | Required for BS in Data Science |
| Enrollment | 1 section a year; 25 students maximum enrollment per section |

8.

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| Course Initiator | Minghsan Zhang |
| Originating Department | Accounting |
| Course Title | **Data Driven Financial Statement Analysis** |
| Catalog Description | This course focuses on analyzing financial statements in big data environments. eXtensible Business Reporting Language (XBRL) reporting replaces traditional text-based financial reporting with machine-readable report which changes the way people analyze financial statements. This course features understanding XBRL reporting as well as retrieving and analyzing public companies’ financial information. |
| Credits | 3 cr. |
| Component Workload Hours | Lecture, 3 credits |
| Course Level | 300 |
| Prerequisites | ACCT 251 and ACCT 252 |
| Degree Requirements | Elective for BS in Accounting |
| Enrollment | 1 section a semester; 25 students maximum enrollment per section |

9.

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| Course Initiator | J.D. Jayaraman |
| Originating Department | Finance and Real Estate |
| Course Title | **Fundamentals of Data Visualization for Business Analytics and Data Science** |
| Catalog Description | This course will provide students with the techniques and state-of-the-art practices in data visualization and communication. The course will explore a wide range of techniques from simple charts to multidimensional analysis using dashboards. The course will help students visually present recommendations for better data driven decision making. |
| Credits | 3 cr. |
| Component Workload Hours | Lecture, 3 credits |
| Course Level | 400 |
| Prerequisites | FINC 305 |
| Degree Requirements | Required for BS in Business Analytics and Data Science |
| Enrollment | 1 section a year; 25 students maximum enrollment per section |

10.

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| Course Initiator | Michael O’Neil |
| Originating Department | Accounting |
| Course Title | **Introduction to Internal Audit** |
| Catalog Description | This course introduces students to the internal audit profession and the Internal Audit process. Topics included in this course are: the Definition of Internal Auditing, The Institute of Internal Audit’s (IIA’s) International Professional Practices Framework (IPPF), risk, governance and control issues, conducting internal audit engagements, and emerging Internal Audit issues. |
| Credits | 3 cr. |
| Component Workload Hours | Lecture, 3 credits |
| Course Level | 300 |
| Prerequisites | ACCT 351 |
| Degree Requirements | Elective for BS in Accounting |
| Enrollment | 1 section a year; 25 students maximum enrollment per section |

11.

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| Course Initiator | Prashanth Ravula |
| Originating Department | Marketing |
| Course Title | **Marketing Analytics** |
| Catalog Description | In this course, students are introduced to basic theory and statistical models, developing hands-on experience in analyzing marketing data for marking decisions. |
| Credits | 3 cr. |
| Component Workload Hours | Lecture, 3 credits |
| Course Level | 400 |
| Prerequisites | MGMT 203, MKTG 231 |
| Degree Requirements | Elective for Marketing major and minor |
| Enrollment | 1 section a year; 25 students maximum enrollment per section |

12.

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| Course Initiator | Nava Cohen and Ling Yang |
| Originating Department | Accounting |
| Course Title | **Survey of Accounting** |
| Catalog Description | A nontechnical introduction to the principles of financial and managerial accounting with emphasis on the use and interpretation of financial reports, managerial planning, and control. The course is for individuals who seek a basic knowledge of accounting and its applications. |
| Credits | 3 cr. |
| Component Workload Hours | Lecture, 3 credits |
| Course Level | 200 |
| Prerequisites | None |
| Degree Requirements | None |
| Enrollment | 1 section a year; 25 students maximum enrollment per section |

II. The committee approved the following program proposal pending minor edits:

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| Proposal Initiator | Denise Branchizio |
| Originating Department | Nursing |
| Program Title | **Second Degree Non Accelerated Bachelor of Science in Nursing** |
| Program Objective | The Nursing Department of New Jersey City University is proposing a new program option leading to the Bachelor of Science Degree in Nursing (BSN): a Second-Degree Non-Accelerated BSN. This option provides a new pathway for baccalaureate prepared individuals in another field to obtain a BSN degree. The Second-Degree BSN, Non- Accelerated option is intended to be completed in 27-months, over the course of five semesters. The intent of this offering is to provide for full-time study at a normal pace to facilitate balancing academic and life responsibilities. By maintaining a full-time plan of study, students are able to optimize federal and other sources of financial aid for which students may qualify.NJCU, like many second-degree programs, currently offers a pathway that is accelerated. The pace of a 20-22 credit, three-semester program offered by NJCU is very challenging both academically and financially. The current 12-month ABSN is extremely rigorous and students are unable to work. As adult students (ABSN average age = 28; range 21 – 61, [Institutional Data, 2018]), many with families of their own, this option is too intense over too short a time period. During recruitment events and phone or email contacts, the department has fielded many inquiries regarding a less intensive format, suggesting this option would benefit the student population of NJCU and the surrounding communities in which NJCU is a significant academic institutuion. The Non-Accelerated BSN, a program of study designed to fit the needs of the students and community, is intended to be delivered in 27 months over the course of five semesters. This program option supports the mission and strategic plan of the university and nursing. |
| Program Curriculum | B.S., 64 credits |