



Office of the Provost and Vice President for Academic Affairs

**MEMORANDUM**

Date: July 16, 2020

To: Dr. James D. Fielder, Jr., Secretary of Higher Education  
Maryland Higher Education Commission

From: Dr. Lesia Crumpton-Young  
Provost and Senior Vice President for Academic Affairs  
Morgan State University

RE: Morgan State University's Objection to Loyola University of Maryland's New Academic Program  
Proposal - Bachelor of Business Administration (B.B.A.) in Information Systems & Data Analytics

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Please find attached Morgan State University's objection letter to the proposal from Loyola University of Maryland to offer a Bachelor of Business Administration (B.B.A.) degree program in Information Systems & Data Analytics. Thank you for your consideration of our response. If you need any additional information, please do not hesitate to contact me at [lesia.young@morgan.edu](mailto:lesia.young@morgan.edu) or (443)885-3350.

c: Dr. David Wilson, President, Morgan State University  
Dr. Farzad Moazzami, Interim Assistant Vice President for Academic Affairs, MSU  
Dr. Fikru Boghossian, Dean, Earl G. Graves School of Business and Management, MSU  
Dr. Emily Dow, Assistant Secretary for Academic Affairs, Maryland Higher Education Commission

# **A REPORT ON THE BBA IN INFORMATION SYSTEMS AND DATA ANALYTICS PROPOSED BY**

## **LOYOLA UNIVERSITY, BALTIMORE**

Prepared by

**The Earl G. Graves School of Business and Management**

**Morgan State University**

**Baltimore, Maryland**

### **Abstract**

This report examines the proposal for a new BBA in Information Systems and Data Analytics program by Loyola University Baltimore (LU) in the Sellinger School of Business. The proposed program is compared to the existing Bachelor of Science in Information Systems (IS) program offered by the Information Science and Systems (INSS) department at Morgan State University (MSU). We provide a multi-faceted analysis: comparison of the program objective, the course-by-course analysis, and duplication in the proposed program. The analyses conclude that LU's BBA in Information Systems and Data Analytics proposal unnecessarily duplicates the existing IS program at MSU. Moreover, the current concentration in Information Systems is already successful for LU. At the risk of accepting this proposal, is the impact to MSU, a preeminent HBCU in the state of Maryland.

### **1. Introduction**

This report provides an analysis of the proposed BBA in Information Systems and Data Analytics (ISDA) to be offered by Loyola College Baltimore (LU) by the Sellinger School of Business. The proposed program in the initial application is compared to Morgan State University's (MSU's) BS in Information Systems program offered by the Information Science and Systems (INSS) department in the Earl Graves School of Business and Management. We compare the bigger picture (the program description) and then provide a detailed course-by-course analysis.

Loyola currently offers a business administration (BBA) degree in the major of Business Administration with a concentration in Information Systems (IS). This concentration is successful in terms of enrollment and graduation trends. Loyola University wishes to start a BBA program in Information Systems and Data Analytics. Morgan State University has been offering a BS in Information Systems since the past twenty-five years. Loyola University, a traditionally white institute (TWI), is in close proximity to Morgan and both are located in the city of Baltimore, less than two miles from each other. In view of the significant proximity of both schools, it becomes imperative to examine whether the proposed BBA in ISDA duplicates MSU's BS in IS.

### **2. Mission Statement and Learning Outcomes**

The Mission of the Earl G. Graves School of Business and Management, under which the INSS department is housed, is to pursue excellence in providing a high-quality management education for a diverse student population and to be recognized as a leading school of business in the Mid-Atlantic region. Building on its competitive advantages of outstanding faculty, diversity, and geographic location, the School engages in student-centered instruction, conducts scholarship both basic and applied, and offers service that fosters the economic and social advancement of its varied constituencies. Earl G. Graves School of Business and Management's Business, as well as Accounting programs, are accredited by AACSB.

Based on Loyola University's website, the Mission of Loyola University is to inspire students to learn, lead, and serve in a diverse and changing world. Loyola, established in 1852, has been serving students and the Baltimore business community for more than 75 years. The Sellinger School of Business and Management focuses on inspiring and preparing students to become responsible business leaders who make their companies and their communities stronger. Loyola embraces a Jesuit education.

As is evident, the Mission statement of both Loyola and Morgan's School of Business are very similar. They both stress the importance of serving a diverse changing world and a diverse student population. Being a part of the School of Business, both Schools serve the Baltimore community in the economic and social advancement in the community. We next show that the learning outcomes of both Loyola's BBA in ISDA and Morgan's BS in IS program are near-identical.

The proposed Information Systems and Data Analytics (ISDA) major prepares students to strategically utilize digital technologies and data analytics in any business-related field and communicate the results effectively to technical and nontechnical audiences. Students learn to adapt to a wide range of current and emerging technologies for technological agility, employ higher-order cognitive abilities for evidence-based decision making, and consider the impact of technology on society.

Morgan's BS in IS prepares students to perform analysis and hone their critical thinking skills by being proficient in current technologies and assess the local and global impact of computing on individuals, organizations, and society. Students are expected to identify, analyze, design, and implement solutions to the real-world business problems through a critical examination of technologies, both current and disruptive, and also be able to identify and evaluate professional, ethical, legal, and social issues and responsibilities.

The learning goals of both the programs are near-identical. Both programs stress the role of technology in the business setting and the ability of students to perform analysis and develop critical thinking skills to solve business problems while considering the impact of technology on society.

Like Morgan State University, Loyola's BBA program in Business Administration is AACSB accredited. As a requirement of universities in Maryland, students must meet the general education requirements, school requirements, and can take courses in the area of concentration (BBA major as proposed). Loyola has a 40 course minimum requirement with 17 general education courses, eight introductory courses to meet the School of Business requirement, and have proposed the advanced major in ISDA of six required core courses and one elective restricted to only pre-specified department courses. In addition, students can take a non-departmental elective from the School of Business and seven free elective courses from any department including the department of Information Systems, Law and Operations.

The BS in IS at Morgan State University requires 42 credits of General Education, 16 courses in School of Business requirement, and ten (10) major courses, of which seven are core courses in IS, two electives courses in IS, and one elective course in any discipline, including IS. Several of the School of Business requirements such as Business Statistics, Macroeconomics, Microeconomics meet the General education requirement for Loyola. Thus, the proposed ISDA program is similar to Morgan's IS program in terms of broad requirements.

### **3. Student Enrollment Impact**

In the proposal, LU has stated that Loyola does not anticipate any impact on the implementation or maintenance of high-demand programs at Historically Black Institutions (HBIs) in Maryland. However, the Information Systems program is a high-demand program, as stated in the proposal. According to the Bureau of Statistics, "Employment of computer and information technology occupations is projected to grow 12% from 2018 to 2028, much faster than the average for all occupations." (page 8 of the proposal). This is also evidenced by LU's and MSU's growth over the last five years. Loyola's concentration in Information Systems has grown from 12 students in 2015 to 38 students in 2019 (see Table B1.1). In a similar vein, MSU's BS in IS program has grown from 19 to 42 graduating students over the same period (Table C4). However, across all universities in Maryland, the growth has been more tepid - growing from 714 students to 871 students (Table C4). There is a significant danger that once Loyola launches the BBA in ISDA, it will severely impact the enrollment and graduation rates at Morgan State University, based on national projections of BLS and statewide graduation rates. Moreover, while, LU anticipates no net new enrollments as it expects a redistribution of enrollment from the existing concentration (Page 4 of the proposal), implicit in the projection data that LU is forecasting, is that LU is expecting a significant increase in the market share from 21 students in Year 1 to 63 students in Year 3 an increase of over 66 percent in three years. This forecasted increase is five times the projected increase of the discipline and is primarily at the expense of student enrollments at other competing institutions such as Morgan State University.

In view of this, the launch of the BBA in ISDA has significant potential to make a long-lasting harmful impact on Minority-Serving Institutions (MSIs), particularly MSU, which has seen healthy growth in enrollment and graduation trends.

### **4. Course-by-Course Comparison Details**

In the preceding sections, we showed how the program objectives are identical and how MSU's BS in IS program will be impacted by a new program offered by LU. In this section, we provide a course-by-course comparison to show the duplication of the program between LU's proposed BBA in ISDA and MSU's BS in IS.

We are listing courses common to both the programs, listing our courses first, followed by courses listed by Loyola:

MSU      -      Loyola

1. INSS.250 (Core) = IS 352 (Core)

2. INSS.360 (Core of SBM) = IS 251 (Core of SBM) Prerequisite of IS Courses
3. INSS.370 (Core) = IS 453 (Core)
4. INSS.380 (Core) = IS 353 (Core)
5. INSS.391 (Core) = IS 355 (Core)
6. INSS.490 (Core) = IS 458 (Core)
7. INSS.395 (Elective) = IS 358 (Core)
8. INSS.492 (Elective) = IS 452 (Elective)
9. INSS.495 (Elective) = IS 499 (Elective)
10. INSS.394 (Elective) = IS 460 (Elective)

The classes above may not be perfect duplicates; however, there is a **very high degree of overlap** in all the courses. The core courses are almost perfect duplicates. When one examines the topics covered in these courses, this overlap is more evident

The following subsections list the course-catalog descriptions. We also provide analyses/explanation of what the overlapping themes are. We first list the core of Loyola's program and do a comparison with MSU's core for the program. Of particular note is that MSU course descriptions are technology agnostic to enable instructors choose emerging technologies that best meets the objectives of the course when the course is offered.

Loyola has the following six courses listed as a core: IS 352, IS 453, IS 353, IS 355, IS 458, IS 358 of the BBA in ISDA. Additionally, IS 251 effectively serves as a core since it is prerequisite for many other courses.

The course names and descriptions are as follows.

#### **(4.1) Comparison of INSS 250 (core) to IS 352 (core)**

##### **INSS 250 Concepts in Computational Thinking- *Three hours; 3 credits***

The aim of this course is to enhance the students' analytical, logical, and structured thinking skills. Students will learn to formulate problems, design algorithms, and develop and implement solutions. The course discusses the basic concepts such as, selection, sequence, and recursion. (Formerly Information Systems Concepts and Methods). Prerequisites (with C or better grade): INSS 141. (FALL, SPRING)

##### **IS 352 – Introduction to Programming in Python (3.00 cr.) Prerequisite: IS 251 or BH 251; IS 353 (may be taken concurrently).**

An introduction to software development with an emphasis on real-world applications. Students are introduced to programming in a modern computer language such as Python or Java. Principles of program design, programming structures, data structures, program testing, and debugging are covered. Emphasis is placed on developing a business application such as a mobile app. No prior programming experience is required.

Analysis:

In both the classes, students learn essentially the same topics, how to design and code computer programs. Both the courses do not assume any prior programming prerequisites. MSU's course requires the introductory course in computer literacy as a prerequisite. Loyola requires IS 251, commonly referred to as a Management Information Systems course. While Loyola's title includes Programming in Python, the course description refers to programming either in Python or Java. This core course is identical to both programs. Students in INSS.250 are currently being taught Python as the programming language to learn different concepts in computational thinking. In the future, this programming language may be replaced by a more current, robust, contemporary programming language.

#### **(4.2) Comparison of INSS 360 (Business core) to IS 251 (Business core)**

##### **INSS 360 MANAGEMENT INFORMATION SYSTEMS - Three hours; 3 credits.**

This course introduces students to information systems (IS) concepts, describes how IS is designed, and the business functions such systems play in organizations. Technological, as well as global and ethical issues of IS, will be addressed in detail. Students will learn how to identify, analyze, and propose possible IS solutions to a variety of organizational problems. The course material will include up-to-date real-world case studies and contemporary business problems that will highlight the theoretical concepts. Topics include enterprise information systems, strategic utilization of IT, information systems planning, IT in organizations, e-commerce, and others. Students will be required to analyze and solve business problems using the productivity tool, MS Office. Prerequisites (with C or better grade): INSS 141. (FALL, SPRING)

##### **IS 251 - Data Analytics and Information Systems (3.00 cr.) Prerequisite: CS 105 or CS 111 or CS 115 or CS 117 or CS 118 or CS 151 or CS 201 or CS 218.**

Students examine the strategic role of information systems in organizations and the integration of data analytics into business activities, enabling quality, timeliness, and competitive advantage. They are immersed in the collection, exploration, visualization, and application of data to make informed business decisions. Students apply database, spreadsheet, and visualization skills to solve real-world business challenges.

#### **Analysis:**

Loyola's and MSU's courses are identical. This course is traditionally called Management Information Systems by universities and is the prerequisite course for several major courses in the field of Information Systems. The prerequisite course for both is a course that covers digital literacy concepts. Moreover, for both the programs, the core is a School of Business core course, rather than a major core course. While LU has added the words Data Analytics in the title, the scope of the Management Information Systems offering across all universities is to analyze and solve business problems using, the productivity tool, MS Office (spreadsheets, database, visualization) and/or other similar tools such as Tableau and SAP as is being done for MSU's INSS.360 course.

#### **(4.3) Comparison of INSS 370 to IS 453**

##### **INSS 370 SYSTEMS ANALYSIS AND DESIGN - Three hours; 3 credits.**

The course introduces students to the process of developing information systems. It provides an introduction to a systematic methodology utilizing tools and techniques to enable effective analysis, design, and documentation of information systems. Students will learn traditional and agile design and development techniques. Students will gain hands-on experience from this course by developing models from the core of formal methods in systems development. **Prerequisite (with C or better grade):** INSS 250, INSS 360. (FALL, SPRING)

##### **IS 453 - Information Systems Analysis and Design (3.00 cr.) Prerequisite: IS 353 or written permission of the department chair.**

Prepares students to play a significant role in the development of information systems in organizations. Students learn to complete the phases of the systems development life cycle- feasibility, analysis, design, implementation, and maintenance-using structured tools and techniques, project management, and oral presentations. Topics also include the roles of systems analysts, designers, and programmers, as well as global and ethical concerns in systems development.

#### Analysis:

Loyola's and MSU's courses are identical. This course title is also near-identical. This course is considered to be the very core of any Information Systems program.

#### **(4.4) Comparison of INSS 380 to IS 353**

##### **INSS 380 DATA AND INFORMATION MANAGEMENT- Three hours; 3 credits**

This course provides an introduction to the fundamental concepts of data and information management. Students learn data modeling techniques, relational data models, normalization techniques, security, and implementation of databases. The course provides an understanding of the theory as well as hands-on experience in database design, implementation, and utilization of organizational databases with DBMS and a language such as SQL. (Formerly Database Systems). **Prerequisite (with C or better grade):** INSS 250, INSS 360. (FALL, SPRING)

##### **IS 353 - Data Management and Database Systems (3.00 cr.) Prerequisite: EC 220, IS 251, MA 151 or MA 251; or written permission of the department chair.**

Students analyze, create a logical design, and implement the physical design for a relational database system. The course includes significant exposure to SQL (Structured Query Language) in both Microsoft Access and Oracle. Students will also be exposed to the challenges associated with managing large amounts of data.

Analysis:

Loyola's and MSU's courses are identical. Both courses cover database management principles and the design of a database, primarily using SQL.

**(4.5) Comparison of INSS 391 (core) to IS 355 (core)**

**INSS 391 IT INFRASTRUCTURE AND SECURITY - Three hours; 3 credits**

This course provides an introduction to IT infrastructure and covers fundamental networking concepts. Topics include networking standards, the OSI model, transmission basics, networking media, introduction to TCP/IP protocols, topologies, ethernet standards, hardware, switching, addressing, and subnetting. It introduces students to the wireless network, network security, and how to design a secured local area network, **prerequisite (with C or better grade):** INSS 360. (FALL, SPRING)

**IS 355 - Cyber Security and Networks (3.00 cr.) Prerequisite: IS 353 or written permission of the department chair.**

Explores the technologies underlying today's networking, multimedia, electronic business, and entertainment industries. This course balances technical and managerial content while covering a broad range of topics, including the strategic role of telecommunications, networking infrastructure, security, encryption, audio, video, intellectual property rights, and the history and politics of the telecommunications industries

Analysis:

Loyola's and MSU's courses are near-identical. Both cover computer networks and security. From the description, it appears that MSU's course is more technical in nature. However, the prerequisite for MSU's course is managerial, whereas, the prerequisite of Loyola's course is more technical.

**(4.6) Comparison of INSS 490 (core) to IS 458 (core)**

**INSS 490: Information Systems Project Development and Management - Three hours; 3 credits**

This capstone course introduces students to project management knowledge areas. Students are required to analyze, design, implement, and test at least one module of an IT project by utilizing the knowledge they gained in the Information Sciences and Systems program.

**Prerequisites:** INSS 260, INSS 370, and INSS 380

**Term(s) offered:** Fall and Spring

**IS 458 - Web-Enabled Applications (3.00 cr.) Prerequisite: IS 251, IS 352, IS 353, IS 358, and IS 453; or written permission of the department chair. IS 355 may be taken concurrently.**



Students explore and apply effective use of the technologies associated with responsive web applications and digital business, including HTML5, CSS3, JavaScript, Bootstrap, and jQuery, all essential to modern companies. In this capstone course, students integrate all of the previous information systems courses, develop a plan for an entrepreneurial business, and create a sophisticated web-enabled senior project.

Analysis:

Loyola's and MSU's courses are very similar in terms of their educational outcomes. Both these courses are capstone courses geared towards integrating the knowledge gained from previous IS courses to analyze, design, and implement a solution. Loyola's courses typically mention specific technologies that the course may cover, whereas MSU's course descriptions are technology agnostic, enabling MSU to change the underlying technology based on advances in the field. The prerequisite of the courses is also almost identical. One of Loyola's mission for each proposed major program includes a required capstone course which will connect general business and major-specific knowledge with the Loyola core curriculum and will demonstrate to students the power that Jesuit values will have as they advance to leadership roles and work to build a better world through business. In the current capstone course, we do not see how the capstone course serves that mission. The current capstone course is a standard Information Systems capstone course that integrates knowledge and enables students to create a working module of an IT project.

**(4.7) Comparison of INSS 395 (elective) to IS 358 (core)**

**INSS 395 DATA ANALYTICS FOR ENTERPRISES - Three hours, three credits.**

This course focuses on data management and knowledge discovery. The first part of the course deals with data management within organizations: master data management and data storage architectures are defined. The second part of the course engages in knowledge discovery using data analytic techniques such as clustering, decision tree induction, regression, neural networks, support vector machines, and text mining (including sentiment analysis). Students will experience practical applications of analytics through guided exercises and case studies.

**Prerequisites:** SSCM 220 with a C or better (SPRING)

**IS 358 - Business Intelligence and Data Mining (3.00 cr.) Prerequisite: EC 220, IS 251, MA 151 or MA 251; or written permission of the department chair. IS 353 may be taken concurrently.**

Students are introduced to data mining as a technology to discover information and knowledge from large datasets for business decisions. Students utilize SAS Enterprise Miner™ to perform data mining using methods such as clustering, regression, and decision trees. Students develop a project using current business intelligence technology for data mining. Forms the foundation for customer relationship management in marketing and forensic accounting.

Analysis:

Loyola's and MSU's courses are near-identical. Both courses are introductory courses on the topic of data analytics, and both also cover data mining. MSU's course also covers text mining, which is covered by another course offered by Loyola (IS 465 – Text Mining). The prerequisite of MSU's course is a business statistics course, while the requirement of Loyola's course is business statistics and coding. While MSU's course is an elective, over 80 percent of IS students take INSS 395 as one of the three elective choices. Advisors encourage students to enroll in this course.

We now list the electives and corresponding courses offered by MSU.

#### **(4.8) Comparison of INSS.492 (elective) with IS 452 (elective)**

##### **INSS 492 SPECIAL TOPICS IN INFORMATION SYSTEMS - Three hours; 3 credits.**

This course addresses specific trends in information systems. **Prerequisites (with C or better grade):** INSS 250, INSS 360. (OFFERED AS NEEDED)

##### **IS 452 - Special Topics in Information Systems (1-3.00 cr.) Prerequisite: IS 251.**

Students explore information systems in a variety of formats and subject areas.

##### Analysis:

Loyola's and MSU's course title and philosophy for the course are identical.

#### **(4.9) Comparison of INSS.495 to IS 499**

##### **INSS 495 INTERNSHIP IN INFORMATION SYSTEMS - Three hours; 3 credits.**

This course provides students in Information Systems the opportunity to broaden their educational experience through supervised work assignments with organizations or governmental agencies. **Prerequisite: Permission of the INSS chairperson.** (FALL, SPRING, SUMMER)

##### **IS 499 - Internship in Information Systems (1-3.00 cr.) Prerequisite: IS 352, IS 353, IS 358, IS 453, or written permission of the instructor. IS 352, IS 353 or IS 453 may be taken concurrently. Restricted to seniors.**

Students participate in individual study and group preparation and reflection while working in a technology-related position for an enterprise. Students work with an executive or information systems professional, performing duties that are matched with Loyola coursework. Each internship is constructed by an information systems professor in conjunction with the on-site internship supervisor. Students work with the professor before engagement and at the end of the term.

##### Analysis:

Loyola's and MSU's course titles are identical. While Loyola's course is only available to seniors, MSU's course is available to any classification of students. However, this course is typically taken by juniors and seniors at MSU.

#### **(4.10) Comparison of INSS 394 (elective) with IS 460 (elective)**

##### **INSS 394 Data Visualization - Three hours; 3 credits.**

This course introduces data visualization as an analytical tool, a medium of communication, and the basis for interactive information dashboards. Students will learn Best practices and communication in data visualization, sharpen analytical skills and learn how to design dashboards. **Prerequisites: SSCM 220 Term(s) offered: TBD**

##### **IS 460 - Data Visualization (3.00 cr.) Prerequisite: CS 485 or IS 353; or written permission of the department chair.**

Students investigate the human processing of information and appropriate representation of data in a visual form. Data come in many forms, such as structured data in databases and unstructured data in social media and images. Some data are called semi-structured and have characteristics of both types. This course focuses on the presentation of data in visual form for humans using current techniques such as Tableau and Qlik.

##### Analysis:

Loyola's and MSU's courses are identical. This course title is identical. While Loyola's course has a database course as one of the prerequisites, MSU's course has Business Statistics as the prerequisite.

In conclusion, in this section, we have shown that six of the seven core courses in the LU proposal are identical to MSU's BS in IS core courses. Students at MSU are strongly advised to take the seventh course as their elective, with over 80 percent of IS students taking that course. The course description for all these seven courses is identical. Moreover, even the course titles for many of the electives are identical. Thus, the proposed BS in ISDA duplicates the existing BS in IS program offered by MSU.

#### **5. Conclusion**

Loyola University's Sellinger School of Business is proposing to offer a new degree BBA in Information Systems and Data Analytics. The LU proposal points out that the current concentration has been and continues to be successful in accomplishing its mission. It is proposing to change the title of the existing program only slightly from what is currently offered while creating a degree around what is already a successful program. This results in considerable duplication of resources and also threatens MSU's program that has seen healthy growth.

We have demonstrated that the proposed program is a near-identical duplicate program that is offered by MSU's Graves School of Business and Management's INSS department. The duplication stems from the learning outcomes and course offerings. Moreover, there are eight other universities offering a similar program in close proximity (within 60 miles) to each other. In particular, Coppin State University, Towson University, University of Maryland Baltimore County, Morgan State University, Notre Dame of Maryland University, and Stevenson University all are in the Baltimore Metropolitan area catering to the needs of students in this metropolitan area, thus already resulting in considerable duplication of

resources. For instance, Coppin State University and Notre Dame University have fewer than eight combined graduates in any one year for this program.

LU is proposing to offer the BBA in ISDA in extremely close proximity to MSU - within a couple of miles. Students in this region draw from the same metropolitan area, and this would significantly increase the competition for students in the state and the city and have a negative impact on enrollment for MSU's BS in IS program going forward. We experienced an increase in graduation and an increase in enrollment in Spring 2020, and we look forward to increasing enrollment in the near future.

With state funding dependent upon student enrollment, allowing LU's BBA in ISDA program to be the same as Morgan's is bound to decrease our state funding in the long run if we experience enrollment decreases. We feel that, given the current economic climate, it is not prudent and efficacious to redistribute the limited available resources of the State of Maryland. We respectfully request that LU not be allowed to duplicate Morgan's Bachelor of Science program in Information Systems.

### **References:**

1. Department of Information Science and Systems, Earl Graves School of Business and Management, Morgan State University (MSU), website: [www.morgan.edu/inss](http://www.morgan.edu/inss)
2. Website, Loyola University (LSU): <https://www.loyola.edu/>
3. Course Catalog, LU: <https://www.loyola.edu/departments/records/catalogues>
4. Academic Program Proposal submitted to MHEC by Loyola University
5. Course Catalog, MSU: [http://www.morgan.edu/academics/academic\\_catalogs.html](http://www.morgan.edu/academics/academic_catalogs.html)