FROSTBURG
STATE UNIVERSITY

December 1, 2025

Sanjay Rai, Ph.D., Secretary of Higher Education
Maryland Higher Education Commission
6 North Liberty Street
Baltimore, MD 21201

Dear Secretary Rai,

The Department of Management and Marketing at Frostburg State University is proposing a new area of concentration in **Business Analytics** under the **Business Administration** major to address the rising demand for data-driven decision makers. As organizations experience exponential growth in data, there is an increasing need for managers who can analyze complex datasets, extract meaningful insights, and inform strategic direction.

The proposed Business Analytics concentration will provide students with technical competencies in data analysis, modeling, visualization, and related analytical tools. Through real-world projects and cross-disciplinary collaboration, students will learn to apply analytical techniques to solve challenges in marketing, finance, operations, and other business functions.

Proposal Title: New Area of Concentration
Proposed Program Title: Business Analytics
Award Level: Bachelor of Science
HEGIS: 50601
CIP: 520201

We appreciate your consideration and support for this proposed area of concentration. If you have any questions, please contact our Associate Vice President, Dr. Sara-Beth Bittinger, at **sbittinger@frostburg.edu**.

Sincerely,

Darlene Brannigan Smith, PhD
Interim President

pc: Dr. Candace Caraco, Associate Vice Chancellor for Academic Programs, Academic and Enrollment
        Services & Articulation, USM
        Dr. Michael Mathias, Provost and Vice President for Academic and Student Affairs, FSU
        Dr. Sara-Beth Bittinger, Associate Vice President, FSU
        Dr. Sudhir Singh, Dean of the College of BECA, FSU

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Cover Sheet for In-State Institutions
New Program or Substantial Modification to Existing Program

Institution Submitting Proposal	Frostburg State University

Each __action__ below requires a separate proposal and cover sheet.

○ New Academic Program ○ Substantial Change to a Degree Program

◉ New Area of Concentration ○ Substantial Change to an Area of Concentration

○ New Degree Level Approval ○ Substantial Change to a Certificate Program

○ New Stand-Alone Certificate ○ Cooperative Degree Program

○ Off Campus Program ○ Offer Program at Regional Higher Education Center

Payment Submitted: ◉ Yes ○ No	Payment Type: ○ R*STARS # JBi16678 ○ Check #	Payment Amount: 250.00	Date Submitted: 12/1/25

Department Proposing Program	Department of Management
Degree Level and Degree Type	Bachelor of Science
Title of Proposed Program	Business Administration - Business Analytics Concentration
Total Number of Credits	120
Suggested Codes	HEGIS: 50601.00	CIP: 520201.0000
Program Modality	◉ On-campus	○ Distance Education (*fully online*)
Program Resources	◉ Using Existing Resources	○ Requiring New Resources
Projected Implementation Date	◉ Fall ○ Spring ○ Summer Year: 2026
Provide Link to Most Recent Academic Catalog	URL: https://www.frostburg.edu/academics/academic-catalogs.php#/home

Preferred Contact for this Proposal	Name:	Sara Beth Bittinger
	Title:	Associate VP
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President/Chief Executive	Type Name: Darlene Brannigan Smith
	Signature: _____ Date: 11/14/2025
	Date of Approval/Endorsement by Governing Board:

Revised 1/2021

Bachelor of Science in Business Administration (Business Analytics Concentration)
Program Proposal

Executive Summary

Frostburg State University Department of Management and Marketing is proposing a new concentration in Business Analytics under the Business administration major to meet rising demand for data-driven decision makers. With exponential growth in data, organizations need managers who can analyze large datasets, identify insights, and inform strategy. The Business Analytics concentration will equip students with technical skills in data analysis, modeling, visualization, and more. Through real-world projects and cross-disciplinary collaboration, students will learn to apply analytical techniques to solve problems across functions like marketing, finance, and operations.

Moreover, the curriculum will emphasize the application of analytical techniques across various industrial sectors such as healthcare, financial services, marketing, manufacturing, mining, construction, real estate, and the like. Students will have the opportunity to work on real-world projects and engage in case studies that simulate actual business scenarios. This experiential approach ensures that graduates possess not only technical expertise but also practical knowledge, the personal attributes, and the communication skills that enable them to effectively collaborate with stakeholders across different departments and functions.

Furthermore, the concentration in Business Analytics aligns seamlessly with the university's mission to provide interdisciplinary education as part of its larger imperative to prepare its students "to meet the challenges of a complex and changing global society. By leveraging resources and faculty expertise from related disciplines, students will receive a comprehensive education that prepares them for careers in business analytics. This multidisciplinary approach fosters collaboration, creativity, and critical thinking – essential competencies required to thrive in today's fast-paced digital environment.

In partnership with the disciplines of Accounting, Computer Science and Information Technologies, Economics, Finance, and Marketing, the Department of Management and Marketing has curated this proposed interdisciplinary concentration in Business Analytics. This concentration incorporates a blend of 27 hours of coursework. The practical nature of this concentration aims at equipping students with the skills needed to apply business analytics in their major or a closely related field.

While the concentration is currently targeted to business majors, it is designed to be attainable for students from a wide range of disciplines. It is also flexible enough to allow for future adjustments and inclusion of the social sciences, humanities, and other areas relevant to contemporary business practices. This initiative mirrors the broader institutional commitment to nurturing well-rounded, industry-ready individuals who can leverage data-driven insights to propel businesses forward.

**Bachelor of Science in Business Administration (Business Analytics Concentration)
Program Proposal**

Frostburg State University

A. Centrality to Institutional Mission and Planning Priorities:

1. Provide a description of the program, including each area of concentration (if applicable), and how it relates to the institution's approved mission.

   The proposed Business Analytics concentration directly supports multiple elements of the university's mission as a student-centered institution focused on experiential learning and preparing students for a complex global society. The program's interdisciplinary nature, incorporating coursework from the business and computer science disciplines, provides the diverse academic knowledge base students need for success in today's data-driven business world. Through real-world projects, hands-on analysis, and internship opportunities, the concentration emphasizes applied, experiential learning. Students gain practical skills in extracting insights from data to drive business strategy and operations. This aligns with the university's emphasis on readying students for the challenges of a modern knowledge economy. Business analytics skills are in high demand, and concentration equips graduates to meet workforce needs in this crucial area. It serves the university's commitment to developing technological competence and supporting economic development in the region and state.

   Furthermore, the focus on hands-on learning and applied projects fosters the critical thinking and communication abilities students require for 21st century careers. With the proliferation of data occurring across industries, the program prepares graduates to be flexible and nimble, and ready to traverse complex, globalized business environments. By leveraging campus resources and partnerships across academic disciplines, the Business Analytics concentration exemplifies the collaborative ethos central to the university's mission. It expands data-oriented educational opportunities, serving diverse constituencies spanning business and computer science.

   In summary, the concentration's applied, real-world focus, interdisciplinary training, and alignment with regional and State workforce needs in the thriving field of analytics strongly supports the university's mission to prepare students for success in a changing world. It serves key priorities around experiential education, developing technological expertise, fostering critical thinking, and collaboration across disciplines.

2. Explain how the proposed program supports the institution's strategic goals and provide evidence that affirms it is an institutional priority.

   The proposed Business Analytics Concentration Program squarely aligns with the institutional strategic goals of Frostburg State University (FSU). The program supports the focus on learning through both the "acquisition and application of knowledge." It is designed to ensure students acquire essential analytical skills and knowledge for success

in the evolving field of Business Analytics. Hands-on projects and internships provide opportunities for applied learning, infusing the curriculum with innovative practices. The program also supports the strategic goal of providing "engaging experiences that challenge our students to excel." Career and professional development are integrated into the student experience through ties to industry partners and practical case studies. By fostering an inclusive and supportive learning environment, the program contributes to creating a campus climate that enhances student well-being. In terms of expanding "regional outreach and engagement," the program bolsters economic development, particularly in Western Maryland. Graduates, armed with data analysis skills, can contribute to local businesses, aiding community development. Moreover, the program's appeal to international partner universities can raise the University's profile regionally, nationally, and globally. Finally, this program aligns university resources with its strategic priorities. It aids in meeting enrollment goals, attracting students interested in acquiring skills that are acutely relevant to the current job market. The institution's transparent budgeting model aids in funneling resources to support program implementation, and faculty professional development opportunities are offered to ensure effective instruction, directly contributing to the strategic goal of promoting faculty and staff success.

In summary, the proposed Business Analytics program seeks to be an institutional priority, playing a pivotal role in fulfilling the university's strategic goals by supporting student learning, fostering engagement, enhancing regional development, and effectively utilizing the university's resources.

3. Provide a brief narrative of how the proposed program will be adequately funded for at least the first five years of program implementation. (Additional related information is required in section L.

The Business Analytics concentration will leverage existing courses and faculty expertise across disciplines for the delivery of a strong, cost-effective program. No new faculty will be needed initially as the current faculty are adequate in staffing courses. Minor equipment costs will be covered by the departments involved departments' budgets involved. The University's state-of-the-art computer labs provide the latest data analytics software and tools to support hands-on coursework.

Furthermore, we have potential commitments from international partner universities to participate in the concentration each year. An estimated 100 international students annually will provide additional tuition revenue to sustain the program long-term. Ongoing marketing will also drive domestic enrollment growth based on high job demand for graduates with analytics skills.

4. Provide a description of the institution's a commitment to:

　　a) ongoing administrative, financial, and technical support of the proposed program

The University is fully committed to providing continuous administrative, financial, intellectual, and technical support to ensure the success of the Business Analytics concentration. Administratively, the program will be overseen by the Department of Management and Marketing to ensure it receives dedicated leadership and guidance. Financially, the efficiencies in the program design and projected enrollment growth will ensure sustainability in funding without the need for major new investments. Technically, the University's IT infrastructure will support advanced analytics software, instructional labs, and appropriate computing needs. The computer lab facility provides state-of-the-art tools for hands-on coursework in concentration.

b) continuation of the program for a period of time sufficient to allow enrolled students to complete the program.

The University recognizes the importance of allowing students who enroll in concentration to complete the full program. The Business Analytics concentration will be offered continuously barring any major unforeseen circumstances. All departments involved are fully committed to contributing required courses, faculty, and resources over the long term to provide students with a robust and seamless educational experience. The University takes its obligations to students seriously and will ensure enrolled students are able to complete the concentration.

B. Critical and Compelling Regional or Statewide Need as Identified in the State Plan:

1. Demonstrate demand and need for the program in terms of meeting present and future needs of the region and the State in general based on one or more of the following:
   a) The need for the advancement and evolution of knowledge

   The field of business analytics is continuously and rapidly advancing. New data technologies, analytical techniques, and applications emerge constantly. This program will allow our institution to remain at the forefront of these knowledge advances. Through cutting-edge curriculum, experiential projects, and cross-disciplinary collaboration, the proposed program will supply analytical knowledge to meet evolving industry and workforce demands. Our graduates will enter the field equipped with up-to-date skills in data science and technologies designed to propel organizations forward.

   b) Societal needs, including expanding educational opportunities and choices for minority and educationally disadvantaged students at institutions of higher education

   This program aims to increase access to high-demand skills and careers for all students, including underrepresented populations. The flexible, interdisciplinary structure makes advanced analytics education accessible to diverse students across majors. Coursework will be designed to engage various learning styles,

overcoming barriers that often preclude minority students from entering STEM fields. Within a strong business and analytical context, the program provides direct career pathways for immediate societal and economic contribution. Outreach to high schools is expected to get students excited about analytics early on. Overall, the program strives to open doors into lucrative, fulfilling careers for diverse populations.

c) The need to strengthen and expand the capacity of historically black institutions to provide high quality and unique educational programs

N/A

2. Provide evidence that the perceived need is consistent with the **Maryland State Plan for Postsecondary Education**.

The proposed Business Analytics program is designed with the goals of the Maryland State Plan for Postsecondary Education in mind, emphasizing equitable access, student success, innovation, high quality education, and lifelong learning.

The program seeks to break down barriers to education for minority and educationally disadvantaged students. Through scholarships, flexible program requirements, and student support services, the program is designed to ensure accessibility to all, in alignment with the State's goal of expanding educational opportunities for minority and disadvantaged students. The program curriculum is purposefully designed to offer students comprehensive training in advanced knowledge and essential practical skills needed in the business analytics field. The program integrates real-world experiences through internships and industry collaborations, preparing students with practical skills for successful careers in alignment with state educational goals. By maintaining a dynamic curriculum that adapts to the rapidly evolving analytics landscape, the program aims to foster innovation among students and establish itself as a leader in offering forward-thinking study models that respond to emerging trends in the field.
In particular the program is consistent with priority 5 (commitment to quality academic programs) and priority 7 (lifelong learning) of the State plan. As such, the Business Analytics concentration program is committed to providing high-quality postsecondary education in Maryland. This includes recruiting and supporting high-quality faculty, keeping the curriculum updated, and ensuring high educational standards, in line with the business programs' adherence to AACSB International standards. The program will recruit and retain faculty with expertise in business analytics and data science. The curriculum will be updated regularly to reflect the latest trends in the field. And the program will have high educational standards, with rigorous coursework and expectations for student learning. Additionally, the ever-changing area of Business Analytics necessitates continuous learning. The Business Analytics concentration program will instill a culture of curiosity and ongoing skill acquisition in its students. Students will be encouraged to learn new skills and stay up-to-date on the latest trends in the field. The

program will also offer opportunities for students to participate in professional development activities, such as workshops and conferences.

C. Quantifiable and Reliable Evidence and Documentation of Market Supply and Demand in the Region and State:

1. Describe potential industry or industries, employment opportunities, and expected level of entry (*ex: mid-level management*) for graduates of the proposed program.

    Business analytics professionals are in high demand across industries as organizations leverage data for decision-making. Graduates can pursue various analyst roles (Data, Business, Business Intelligence, Operations Research, Marketing) or Analytics Manager positions in sectors spanning finance, insurance, consulting, technology, healthcare, government, retail, and manufacturing. U.S. labor data confirms that analytics professionals are primarily employed in corporate management, banking/finance, consulting, insurance, and IT services.

    Analytics positions typically require a bachelor's degree minimum and often entail mid-level responsibility from the start. Graduates with specialized training enter analyst positions that are considered mid-level roles rather than entry-level clerical jobs. These positions involve management interaction to inform strategic decisions, effectively placing graduates on a management track. Operations research analysts, for instance, advise managers on strategic decisions using advanced quantitative skills, allowing business analytics graduates to qualify for professional-level positions.

2. Present data and analysis projecting market demand and the availability of openings in a job market to be served by the new program.

    The job market for analytical roles is strong and growing in the Maryland-Virginia-Washington, DC (MVD) region. Data, drawn from U.S. Bureau of Labor Statistics (national projections) and Maryland labor market information, on current employment, projected growth, annual openings, and key industries driving demand for Business Analysts, Data Analysts, Marketing Analysts, Financial Analysts, Operations Analysts, and Supply Chain Analysts is tabulated below, reflecting regional trends. ,

Table 1. Employment Projections and Key Industries for Selected Analyst Roles in the Maryland-Virginia-DC (MVD) Region

Occupation	Current Employment (2023)	Projected Growth (2023–33)	Annual Job Openings	Key Industries with High Demand
Business Analyst (Management Analyst)	Nationwide: ~1,018,300 Link Maryland:	Nationwide: +11% Link Maryland:	Nationwide: ~95,700/year Link Maryland:	Consulting & professional services; corporate management;

				finance & insurance; government
Data Analyst (Data Scientist)	Nationwide: ~202,900 Link Maryland: ~2,330 (2020) Link	Nationwide: +36% Link Maryland: +31% (2020–30) Link	Nationwide: ~20,800/year Link Maryland: ~260/year Link	Tech & R&D (scientific/IT services); corporate enterprises; insurance; data consulting
Marketing Analyst (Market Research Analyst)	Nationwide: ~903,400 Link	Nationwide: +8% Link	Nationwide: ~88,500/year Link	Corporate management; information (media/tech); finance & insurance; wholesale trade; marketing consulting
Financial Analyst	Nationwide: ~404,800 Link	Nationwide: +9% Link	Nationwide: ~30,700/year Link	Securities/investment firms; banking & credit institutions; insurance; corporate finance; professional financial services
Operations Analyst (Operations Research Analyst)	Nationwide: ~123,300 Link	Nationwide: +23% Link	Nationwide: ~11,300/year Link	Federal government; manufacturing; professional/technical services; corporate management; finance
Supply Chain Analyst (Logistician)	Nationwide: ~237,100 Link	Nationwide: +19% Link	Nationwide: ~26,100/year Link	Federal government; manufacturing; corporate management; wholesale trade; professional/technical services

Notes: Maryland data for occupations (where shown) references the 2020 baseline projections through 2030 from the Maryland Department of Labor. Nationwide data references the 2023 baseline projections through 2033 from the U.S. Bureau of Labor Statistics (BLS). Annual openings include new growth plus replacements (turnover, retirements). Growth rates shown (e.g., +11% or +36%) are approximate decade-long projections.

Sources: U.S. Bureau of Labor Statistics (2023 baseline, 10-year outlook) Projections. Maryland Dept. of Labor (2020–2030) Projections show similar trends for the State. Annual openings include new growth and replacements (retirements/turnover)

3. Discuss and provide evidence of market surveys that clearly provide quantifiable and reliable data on the educational and training needs and the anticipated number of vacancies expected over the next 5 years.

Below is a summary of market surveys and studies that offer quantifiable, reliable data on the educational and training needs for business analytics and related fields, as well as anticipated vacancies over the next five years in the MVD region (Maryland, Virginia, Washington D.C.). These sources demonstrate strong demand for analytics-trained professionals and highlight specific skill gaps that education providers can address.

Table 2. Major Market Surveys on Business Analytics Demand

Survey	Key Findings & Vacancies (Next 5 Years)	Educational & Training Needs	Source Link
Maryland Department of Labor *Occupational Projections (2020–2030)*	- Identifies high-growth analytics roles (e.g., Data Scientist, Management/Business Analyst, Operations Research Analyst) with double-digit growth. - Projects thousands of annual openings in analytics-related jobs in Maryland alone, ensuring tens of thousands of vacancies statewide over five years. - Growth is driven by federal agencies, finance/insurance, and professional services.	- Emphasizes need for advanced or specialized degrees - Technical skills (statistics, SQL, visualization) plus business acumen are in demand. - Aligns with employers' call for more graduates with strong analytical and communication capabilities.	Maryland Occupational & Industry Projections
U.S. Bureau of Labor Statistics (BLS) *Employment Projections (2023–2033)*	- Projects faster-than-average growth for analyst roles nationwide (e.g., ~36% for Data Scientists, 23% for Operations Research Analysts, 11% for Management Analysts). - Annual openings for these roles range from 11,300 (Operations Research) to 88,500 (Marketing Analysts). - Over five years, each occupation will produce tens of thousands of new + replacement vacancies, many in the MVD region.	- BLS Occupational Outlook Handbooks indicate bachelor's degree minimum, with master's degrees increasingly preferred for advanced analytics (e.g., Data Science, Business Analytics). - Employers seek hard skills (machine learning, data visualization) plus soft skills (communication, problem-solving). - Mid-level and managerial track roles strongly favor graduate-level training.	BLS Employment Projections

Burning Glass (Lightcast) *Real-Time Job Postings Analysis*	- Tracks thousands of job ads for "Data Analyst," "Business Analyst," "Operations Analyst," etc. in the MVD region, reinforcing persistent, high demand. - Demand for analytics skills is rising steadily; many postings highlight Python, R, SQL, Tableau plus business/industry knowledge. - Projections suggest the talent shortage will continue, pushing employers to compete for qualified candidates.	- Surveys indicate many employers require or prefer candidates with formal training in analytics or data science. - Industry certifications in data tools (e.g., Tableau, AWS) can boost employability, but academic credentials are still a major factor. - Communication, critical thinking, and domain expertise are also highlighted as crucial skills.	Data often cited in state/university reports; aggregated link: Maryland Projections
Greater Washington Partnership & Maryland Tech Council *Regional Workforce Surveys*	- Employer surveys across DC, Maryland, Virginia show heavy demand for analytics talent across tech, government contracting, finance, and biotech. - Companies project thousands of vacancies in analytics/data roles over the next five years, citing big data and digital transformation as growth drivers. - Many employers struggle to fill mid-level analyst and manager positions.	- Call for expanded university programs and industry-academic partnerships to produce graduates with technical + managerial skills. - Surveys stress interdisciplinary curricula: data science fundamentals + business strategy + leadership. - Emphasis on developing "analytic translators"—people who can link data insights with organizational goals.	Greater Washington Partnership Maryland Tech Council

From these surveys, it is evident that the demand for analytics professionals in the MVD region will remain robust over the next five years at a minimum. Consistent findings across state, federal, and private-sector reports confirm that employers need thousands of new hires annually to fill roles in business analytics, data science, operations research, marketing analysis, financial analysis, and supply chain management. However, the talent pipeline from existing educational programs has not fully met this demand, leaving vacancies unfilled or filled by candidates lacking the full mix of technical expertise and business insight.

4. Provide data showing the current and projected supply of prospective graduates.

The table below summarizes the most recent publicly available annual graduation numbers for each listed program. Where a specific concentration is not tracked separately by the reporting

agency, the numbers include the entire major under which that track/specialization falls. These data reflect approximate completions for the 2024 academic year, based on Maryland Higher Education Commission (MHEC) and institutional reporting.

Table 3. Undergraduate Business Analytics Programs in USM Institutions

Institution	Program Name	Most Recent Annual Graduates (2024)	Notes
University of Maryland, College Park (Robert H. Smith School of Business)	Operations Management & Business Analytics (major)	65	Reported as "Operations Management & Business Analytics" graduates collectively; no separate breakdown for Operations vs. Analytics.
Towson University (College of Business & Economics)	Business Administration – Business Analytics Track	495 (All Business Administration major graduates)	Total includes all Business Administration B.S. graduates (all tracks). Business Analytics completers are a subset within that larger group.
University of Baltimore (Merrick School of Business)	Business Administration – Data Analytics Specialization	89 (All Business Administration major graduates)	Specialization completions are grouped with the overall Business Administration major for reporting purposes.
Salisbury University (Perdue School of Business)	Information Systems – Business Analytics Focus	57 (All Information Systems major graduates)	Graduates of the Business Analytics focus are included under the overall Information Systems completions.
Bowie State University (College of Business)	Business Administration – Data Analytics Concentration	124 (All Business Administration major graduates)	Data Analytics students are counted among all Business Administration graduates.
Coppin State University (College of Business)	Data Science	0	The program is relatively new (approved in 2021). No reported graduates as of the 2024 reporting period.
University of Maryland Global Campus (UMGC)	Data Science (online analytics degree program)	81	First graduating cohort reported in 2024 for this relatively new online program.

Sources: Maryland Higher Education Commission (MHEC) Degree Completion Reports (2024); Institutional fact sheets and publicly available data (2024)

Note: Exact numbers for each *track* or *specialization* are often not disaggregated in official databases. Therefore, reported totals may include students from multiple related areas under the same major code.

As businesses increasingly adopt data-driven strategies, universities are expanding analytics offerings, suggesting an upward trend in the number of graduates over the next 3–5 years. However, according to the U.S. Bureau of Labor Statistics, analytics-related occupations (including data analysts, management analysts, and data scientists) are projected to grow faster than average across most industries over the coming decade. This sustained industry demand often offers additional impetus to institutions to expand seat capacity in analytics programs, thereby further increasing future output in the number of graduates.

D. Reasonableness of Program Duplication:

1. Identify similar programs in the State and/or same geographical area. Discuss similarities and differences between the proposed program and others in the same degree to be awarded.

2. Provide justification for the proposed program.

   The table below lists the University System of Maryland (USM) institutions that offer an undergraduate major or specialization in Business Analytics (or closely related fields). Each entry includes the program name, degree type, modality, and campus location.

Table 4. Business Analytics Program in USM institutions

Institution	Program Name	Degree Type	Modality	Location
University of Maryland, College Park (Robert H. Smith School of Business)	Operations Management & Business Analytics (major)	B.S.	In-person	College Park, MD
Towson University (College of Business & Economics)	Business Administration – Business Analytics Track	B.S.	In-person	Towson, MD
University of Baltimore (Merrick School of Business)	Business Administration – Data Analytics Specialization	B.S.	In-person	Baltimore, MD
Salisbury University (Perdue School of Business)	Information Systems – Business Analytics Focus	B.S.	In-person	Salisbury, MD
Bowie State University (College of Business)	Business Administration –	B.S.	In-person	Bowie, MD

	Data Analytics Concentration			
Coppin State University (College of Business)	Data Science	B.S.	In-person	Baltimore, MD
University of Maryland Global Campus (UMGC)	Data Science (online analytics degree program)	B.S.	Online	Adelphi, MD (Online)

FSU will be the only four-year college in Western Maryland that offers a Business Analytics concentration within its Business Administration program. This geographic imperative ensures that students in the region have access to a specialized analytics education without the necessity for relocating to the more populated regions of Maryland. FSU provides a discernably personalized and community-driven learning environment, with smaller class sizes and individualized faculty support. Additionally, regional employers in Western Maryland and neighboring states (Pennsylvania and West Virginia) benefit from having locally trained analytics professionals, thereby reducing the need to recruit talent from distant institutions.

FSU's Business Analytics program takes an interdisciplinary approach by integrating key contributing fields such as Business (Finance, Marketing, Accounting, and Management), Computer Science & Information Technologies, and Economics. This broad academic collaboration ensures that FSU graduates not only develop a strong foundation in business strategy but also gain essential technical skills in data science, programming, and quantitative analysis. FSU's curriculum goes well beyond data interpretation, often the focus at many other institutions, and incorporates advanced competencies in data modeling, visualization, and decision science tools. This comprehensive approach equips students with both analytical expertise and practical business insights, making them well-prepared to tackle complex, data-driven challenges across diverse industries.

E. Relevance to High-demand Programs at Historically Black Institutions (HBIs)

1. Discuss the program's potential impact on the implementation or maintenance of high-demand programs at HBI's.

   Maryland is home to four Historically Black Institutions: Morgan State University (Baltimore City), Bowie State University (Prince George's County), the University of Maryland Eastern Shore in Princess Anne (Somerset County), and Coppin State University (Baltimore City).

   Although Bowie and Coppin State Universities offer business/data analytics programs comparable to FSU's proposed business analytics program, they do not serve the rural regions of western Maryland—including Garrett, Allegany, and Washington Counties. The University of Maryland Eastern Shore and Morgan State University, meanwhile, do not offer business/data analytics programs. Despite the collective offerings of the above

programs, the statewide demand for business analytics is clearly unmet. Given FSU's rural location and its distance from these institutions, the proposed business analytics program is not expected to affect their enrollment.

F.   Relevance to the identity of Historically Black Institutions (HBIs)

1. Discuss the program's potential impact on the uniqueness and institutional identities and missions of HBIs.

    Based on the context provided above, it is not anticipated that the proposed Business Analytics program will have any impact on the institutional identities and mission of HBIs.

G.   Adequacy of Curriculum Design, Program Modality, and Related Learning Outcomes (as outlined in COMAR 13B.02.03.10):

1. Describe how the proposed program was established, and also describe the faculty who will oversee the program.

    The proposed business analytics program, to be housed in the Department of Management and Marketing at the College of Business, Engineering, and Computational & Mathematical Sciences, would utilize already developed, existing courses to comprise its curriculum. Pending approval, the university anticipates enrolling its first cohort of students in Fall 2026 and graduating approximately 70 students annually in the long term. Dr. Michael Monahan, Professor and Chair of the Department of Management and Marketing, will oversee the implementation of the program.

2. Describe educational objectives and learning outcomes appropriate to the rigor, breadth, and (modality) of the program.

    Below is a description of the Educational Objectives and Learning Outcomes for the proposed Business Analytics concentration, all delivered in a face-to-face format.

    Educational Objectives

    Objective 1: Technical Proficiency in Analytics
    Students will develop strong foundational and advanced analytical skills, including data collection, data wrangling, statistical analysis, predictive modeling, and data visualization. They will gain proficiency in tools such as Excel, SQL, R/Python, and Tableau/Power BI. This hands-on technical training is carried out in classroom computer labs, where immediate instructor feedback enhances learning and fosters rigorous skill development.

    Objective 2: Business Knowledge Integration
    Alongside their technical training, students will acquire a solid grounding in core business disciplines such as accounting, finance, marketing, and operations. They will

learn to apply data analytics techniques to inform decision-making and strategic planning in each of these areas. Face-to-face instruction allows for interactive discussions and problem-solving sessions, ensuring that students understand how analytics complements and enhances fundamental business principles.

Objective 3: Critical Thinking and Data-Driven Problem Solving
Students will learn to identify complex business problems, gather relevant data, and apply appropriate analytical methods to propose evidence-based solutions. Instructors present real-world data scenarios and challenging case studies in person, encouraging students to collaborate and think creatively. The classroom environment allows for immediate feedback, stimulating deeper analysis and critical reasoning skills.

Objective 4: Ethical and Responsible Data Utilization
Throughout the program, students will explore ethical considerations in data collection, analysis, and reporting, with particular emphasis on confidentiality, privacy, and social impact. In-person debates and role-playing exercises introduce ethical frameworks and challenge students to weigh the consequences of various decisions on stakeholders. This face-to-face approach reinforces a culture of accountability and responsible data stewardship.

Objective 5: Interdisciplinary Collaboration and Communication
To enhance teamwork and leadership abilities, the program features group projects that span different business disciplines, requiring students to integrate their technical and managerial knowledge. By sharing ideas in person and receiving real-time feedback from peers and faculty, students sharpen their communication skills and learn to convey data-driven insights to diverse audiences with clarity and impact.

Objective 6: Global and Cross-Cultural Competence
Students will be exposed to global business contexts and international datasets, developing the ability to adapt analytics approaches to different cultural and regulatory environments. Face-to-face lectures and discussions on multinational case studies highlight how variations in laws, norms, and economic conditions can influence data analysis and business decisions. This objective ensures students appreciate the global scope of analytics.

Objective 7: Experiential Learning and Real-World Application
Hands-on learning opportunities—such as internships, case competitions, and capstone projects with industry partners—prepare students to tackle authentic business challenges through analytics. Frequent in-person interaction with faculty and industry guests enables students to network, collaborate, and gain practical insights into evolving industry practices. These experiential components reinforce classroom learning and foster professional development.

Learning Outcomes

Outcome 1: Business Core Proficiency
Graduates will demonstrate mastery of key business disciplines and articulate the ways data analytics can enhance decision-making processes in each functional area. Performance will be measured through exams, projects, and capstone experiences requiring integrated business and analytics knowledge.

Outcome 2: Critical Thinking and Problem Solving
Students will be able to identify and analyze complex business issues, integrate data from multiple sources, and recommend sound, data-driven strategies. Classroom-based case analyses and group problem-solving exercises will test their ability to combine analytical rigor with practical judgment.

Outcome 3: Ethical Reasoning
Graduates will recognize ethical issues in data usage and managerial decisions, assessing their impact on stakeholders and society. In-person discussions, written reflections, and scenario-based role-plays will evaluate how well students apply ethical frameworks and address potential biases or privacy concerns.

Outcome 4: Oral Communication
Students will become adept at presenting analytical findings and recommendations persuasively to both technical and managerial audiences. Evaluation will occur via in-class presentations, peer feedback, and rubrics that assess clarity, organization, and audience engagement, ensuring that graduates can communicate insights effectively.

Outcome 5: Written Communication
Through various writing assignments—including analytical reports, proposals, and technical documentation—students will demonstrate coherent and professional written communication skills. Instructors will grade these assignments for logical structure, clarity of analysis, proper referencing, and grammatical correctness.

Outcome 6: Global Perspective
Graduates will understand how cultural, regulatory, and global market differences affect business decisions, particularly in the context of analytics-driven strategies. Projects involving international datasets and in-class discussions on cultural nuances will demonstrate students' ability to adapt their analytical approaches across borders.

Outcome 7: Teamwork and Leadership
Students will engage in collaborative projects that develop leadership skills and teamwork dynamics. Peer evaluations, shared goals, and in-person project coordination will reflect each student's capacity for conflict resolution, role delegation, and cohesive teamwork, ensuring they can lead and contribute effectively.

Outcome 8: Advanced Data Analytics Techniques
By employing statistical methods, machine learning algorithms, and visualization tools,

graduates will gain the expertise needed to work with large, complex datasets. Performance on data-focused projects and real-time demonstrations of proficiency in tools like Python, R, or Tableau will confirm their technical competence.

Outcome 9: Adaptability in a Changing Digital World
Finally, students will acquire the flexibility to learn and apply emerging analytical technologies, keeping pace with evolving industry trends. Classroom-based presentations, portfolio showcases, and participation in on-campus research or competitions will highlight their capacity to adapt in a rapidly shifting digital landscape.

In summary, the Business Analytics concentration emphasizes rigorous technical training, integration with core business knowledge, and a strong commitment to ethical, real-world application. By delivering the program entirely through face-to-face instruction, FSU ensures students benefit from immediate feedback, collaborative learning experiences, and direct industry engagement—effectively preparing graduates to become data-savvy professionals capable of meeting modern business challenges.

3. Explain how the institution will:

    a) provide for assessment of student achievement of learning outcomes in the program
    b) document student achievement of learning outcomes in the program

FSU's proposed Business Analytics undergraduate concentration will adhere to the Association to Advance Collegiate Schools of Business (AACSB) standards and undergo regular review under the auspices of the Assurance of Learning (AoL) program. By systematically assessing and documenting the achievement of learning outcomes, the program will reflect AACSB's principles of continuous improvement and high academic quality. To ensure alignment with these standards, the Department of Management and Marketing will map the new Business Analytics concentration to the college's existing Program Learning Goals (PLGs), which encompass competencies in analytical thinking, communication, ethical reasoning, global perspective, and teamwork. These competencies are especially relevant to business analytics, where students must collect and interpret data, present insights persuasively, address ethical concerns about data usage, adapt analyses to international contexts, and collaborate effectively across teams in informing both strategy and operations.

To measure student learning directly, faculty will employ several methods embedded within the curriculum. In advanced courses, students will complete analytics projects and case studies—often drawn from real-world scenarios—that will be scored using standardized rubrics designed to capture methodology, analytical depth, and clarity of recommendations. Exams and quizzes will assess foundational skills in statistics, programming, and data management. Also, as a culminating experience, the capstone project may include a comprehensive rubric evaluating technical mastery, problem-solving, and communication skills. Laboratory-based assignments will allow instructors

to observe and assess student proficiency in data handling and visualization tools (e.g., R, Python, Tableau), while oral presentations will highlight each student's aptitude for explaining complex data insights to a range of audiences.

Indirect assessments will supplement these direct measures by capturing broader perspectives on the program's effectiveness. Course evaluations and exit surveys will provide feedback on the adequacy of teaching methods and resources in supporting the development of analytics competencies. Alumni and employer surveys will gauge how well graduates leverage their business analytics skills in professional settings, and feedback from employers or internship supervisors will shed light on real-world performance, highlighting areas where the curriculum may be refined to better meet industry expectations. Together, these direct and indirect assessments will enable FSU to map explicit learning outcomes—such as proficiency in analytical tools, application of techniques across business functions, effective communication of insights, and ethical considerations in data-driven decision-making—to relevant assessments and gather evidence of student mastery.

Throughout each semester, assessment data will be compiled into AoL reports. The AoL Committee will analyze performance trends against benchmarks. When gaps appear—in ethical reasoning, technical competencies, or presentation skills—faculty will collaborate on improvement strategies, adjusting curricula and teaching approaches. Resources will be directed toward addressing identified weaknesses. All steps will be documented in ongoing AoL reports, demonstrating FSU's commitment to quality assurance for AACSB accreditation.

4. Provide a list of courses with title, semester credit hours and course descriptions, along with a description of program requirements

Table 5. Required Courses in Concentration (15 Credits)

Requirement	Credits	Courses	Notes
All five courses required.	15	- MGMT301 - Data Modeling in Business (3) - MGMT302 - Applied Business Analytics (3) - ACCT365 - Accounting Analytics (3) - FINA410 - Financial Modeling (3) - MKTG468 - Digital Marketing Analytics (3)	

Table 6. Elective Courses in Concentration (12 Credits)

Requirement	Credits	Eligible Electives	Notes
Choose 4 courses (total 12 credits) from the list below.	12	- MGMT402 - Project Management (3) - BMIS455 - Management Information Systems (3) - MGMT391 - Management Seminar (3)	Must meet prerequisites for each elective chosen.

		- MGMT494 - Internship in Management (1 - 6) - MGMT499 - Independent Study in Management (1 - 3) - MKTG462 - Marketing Research (3) - MKTG467 - Social Media Marketing (3) - FINA371 - Insurance Planning and Risk Management (3) - FINA475 - Securities Investment (3) - ECON305 - Managerial Economics (3) - ECON460 - Introduction to Econometrics (3) - DTSC201 - Introduction to Data Analysis & Visualization (3) - DTSC301 - Data Modeling, Wrangling, and Application (3) - DTSC401 - Data Privacy and Ethics in Data Science (3) - COSC130 - Introduction to Programming (3) or COSC240 - Computer Science I (4) - COSC300 - Structured Systems Analysis and Design (3) - ITEC315 - Programming (3) - ITEC345 - Database Systems I (3) - ITEC360 - Operating Systems (3) - ITEC442 - Electronic Commerce (3)	Students can earn a maximum of six credits for MGMT 494. Credit will be awarded for either COSC 130 or COSC 240, but not for both courses.

Course Descriptions

MGMT301 - Data Modeling in Business (3)

This course delves into data analytics employing R and R Studio, honed for business applications. It covers fundamental syntax, data structures, and visualization, alongside essential data transformation and normalization techniques for business data integrity. The curriculum also encompasses databases and MySQL, focusing on SQL commands and database schema design vital for effective data management. A segment on PowerBI is included, empowering attendees to create compelling visualizations. By the end, participants will be adept at integrating R and MySQL, conducting business-centric data

analysis, and generating insightful reports to inform business decisions. Prerequisites: MGMT200; Fall semester

MGMT302 - Applied Business Analytics (3)

This course introduces predictive and prescriptive analytics techniques for data-driven business decision making. Students will learn how to apply methods like regression, forecasting, optimization, simulation, and decision analysis to develop solutions and recommendations that optimize business outcomes. Through the use of R, Excel, and other tools, students will gain hands-on experience building models for prediction, classification, clustering, forecasting, decision analysis, and other applications in operations, marketing, finance, and management. Prerequisites: MGMT200; Spring semester

ACCT365 - Accounting Analytics (3)

The primary objective of this course is to furnish students with a comprehensive grasp of data analytics thinking and terminology, coupled with practical exposure to the tools and techniques employed in data analytics. Upon completing this course, students will possess the requisite skills to translate accounting and business challenges into actionable proposals, which they can proficiently present to managers and data scientists. It's important to note that while this course will involve some utilization of tools, its core emphasis lies in elucidating concepts, rather than delving into algorithms or statistical mathematics. Spring. Prerequisite: C grade or better in ACCT 212 and Math 109, or higher.

FINA410 - Financial Modeling (3)

FINA 410 is designed to analyze finance problems using Microsoft Excel. The course examines three broad areas: financial analysis, valuation and basic data analysis skills. These areas are examined primarily through the analysis and projection of financial statements, time value of money, bond valuation, stock valuation, and capital budgeting tools (NPV, IRR, and others). The learning methodology will use a mixture of case studies, lectures, in-class and out-of-class Excel projects. Fall. Prerequisite: ACCT 211. Pre/Co-requisite: FINA 370

MKTG468 - Digital Marketing Analytics (3)

Introduction to web analytics and the artful use of data found in the digital space. Provides a foundation to apply data analytics to real-world challenges marketers confront daily. Focus on the skills and practical abilities marketing analysts need in today's digital world. Spring. Prerequisite: a grade of C or better in MKTG 261.

MGMT402 - Project Management (3)

This course guides students through fundamental project management concepts and behavioral skills needed to successfully launch, lead, and realize benefits from projects in profit and nonprofit organizations. Successful project managers skillfully manage their resources, schedules, risks, and scope to produce the desired outcome. In this course, students explore project management with a practical, hands-on approach through case studies and class exercises. Every Semester Prerequisites: MGMT 251 and earn at least 90 credits.

BMIS455 - Management Information Systems (3)

Relation of MIS to the management functions of planning, control, and decision making. Concepts that underlie MIS: systems management, databases, computers, telecommunications, and general systems design and implementation. Every semester. Prerequisite: MGMT 251.

MGMT391 - Management Seminar (3)

Advanced topics presented by faculty and invited guests. Multiple themes chosen under the supervision of the instructor and/or College of Business, with timely relevance to management needs. Variable. Repeatable up to 18 credits with different topics.

MGMT494 - Internship in Management (1 - 12)

Guided work experience in management for business, nonprofit or government organizations. Minimum of 45 clock hours of experience for each credit. Academic components include: internship paper, internship log/journal, and site supervisor's evaluation of the student's performance. Previous experience not acceptable for credit. Repeatable for maximum of 12 credits. Every semester, winter and summer sessions. Prerequisites: Sophomore standing; department chair's approval.

MGMT499 - Independent Study in Management (1 - 3)

Research and report on a specific topic not covered by regularly rostered courses. Topic will be defined by the student in conjunction with faculty sponsor. Proposals must be approved prior to registration. Repeatable for a maximum of 4 credits. Every semester. Prerequisites: 18 credits of business administration course work, 90 credits and permission of department chair.

MKTG462 - Marketing Research (3)

Students design a marketing research project, sample the population, collect and analyze data, and interpret the findings. There is an emphasis on performing basic statistical analysis using a hand-held calculator as well as statistical software. Every semester. Prerequisite: a grade of C or better in MKTG 361 and MATH 109/110/380.

MKTG467 - Social Media Marketing (3)

Explores emerging business models and examines digital marketing strategy in the new media landscape, specifically an understanding of major social media platforms, and corresponding target demographics. Use social media to plan, execute, and manage content optimization and promotional campaigns for greater customer engagement. Fall. Prerequisite: a grade of C or better in MKTG 261.

FINA371 - Insurance Planning and Risk Management (3)

The nature of risk and its effect on the business enterprise. Various types of insurance, underwriting practices, actuarial and contractual problems, and government regulations. Spring.

FINA475 - Securities Investment (3)

Investment opportunities in financial instruments. Valuation of fixed income, equity, and derivative securities. Evaluation of mutual funds. Investment strategies for portfolio management: portfolio selection, diversification, and performance analysis. Spring. Prerequisite: FINA 370 or ACCT 312.

ECON305 - Managerial Economics (3)

Applications of micro-economic theory to management practices. Topics may include demand estimation and forecasting; production and cost; pricing in various market structures; and special topics in firm decision making. Fall. Prerequisites: ECON 201/211 and ECON 202/212; MATH 118 /118A, or MATH 220 or MATH 236.

ECON460 - Introduction to Econometrics (3)

Applies economic theory, mathematics, and statistical techniques for the purpose of testing hypotheses about economic phenomena, estimating coefficients of economic relationships, and forecasting economic events. Fall. Prerequisites: ECON 201/211, ECON 202/212 and MATH 109/109A/209/110/380.

DTSC201 - Introduction to Data Analysis & Visualization (3)

Introduction to Data Science, Data Analysis, and Data Visualization. Topics include data sources, kind, and format, data structures and storage, working with data, data plotting and visualization, data modeling, and etc. Fall. Prerequisite: C or better in MATH 109/109A, or MATH 280, or MATH 380 and prerequisite or corequisite of COSC130 or COSC240.

DTSC301 - Data Modeling, Wrangling, and Application (3)

Data analytics skills. Topics include data modeling and storage, data wrangling such as data cleaning, preprocessing, transformation, merging and reshaping, data visualization, data science applications, and etc. Fall. Pre-requisite: Grade of C or better in DTSC 201 and corequisite enrollment in MATH 280.

DTSC401 - Data Privacy and Ethics in Data Science (3)

A detailed study of data privacy and ethics in Data Science and its applications. Topics include the standards and policies for data collection, organization, and utilization. Ethical and legal concerns such as data ownership, user's expectations, regulations, bias, and security will also be addressed. Variable. Prerequisite: Grade of C or better in DTSC 301

COSC130 - Introduction to Programming (3)

Introduction to computer programming; control flow, arrays, variables, functions, file processing; stages of software development. Variable.

COSC240 - Computer Science I (4)

Introduces the fundamental concepts of programming: Simple data types, control structures, array and string data structures, algorithms, debugging techniques and the social implications of computing. Emphasizes good software engineering principles and developing fundamental programming skills in the context of a language that supports the object-oriented paradigm. Three hours lecture; two hour lab. Every semester. Prerequisites: Test at level 3 or above on mathematics placement test or grade of C or better in MATH 118/119/119A or corequisite enrollment in MATH 118/119 /119A.

COSC300 - Structured Systems Analysis and Design (3)

Analysis and design of information processing systems. Topics include system development life cycle: study phase, design phase, development phase, operation phase.

Student will design and analyze a simple system. Spring. Prerequisite: Grade of C or better in COSC 240 or grade of C or better in ITEC 315.

ITEC315 - Programming (3)

Fundamental data structures including the use of stacks, queues, graphs and trees; fundamental programming constructs including basic syntax and semantics; object oriented programming; algorithms and problem solving; event-driven programming; recursion. Every semester. Prerequisites: Grade of C or better in COSC 100/110 or grade of C or better in COSC 101 and COSC 130 or permission of the instructor.

ITEC345 - Database Systems I (3)

Introduction to principles of database development focusing on major business functions and benefits of databases, database planning, database models, database design, and database applications. Learn how to approach a real world database project, convert the project requirement to a design and finally implement using a commercial database management system. Spring. Prerequisite: Grade of C or better in ITEC 315.

ITEC360 - Operating Systems (3)

Fundamentals of operating systems including both Unix and Windows operating systems; architecture and organization; computing infrastructure; enterprise deployment software; firmware; hardware; installation; maintenance; administrative activities; administrative domains. Spring. Prerequisites: Grade of C or better in COSC 102 and ITEC 315.

ITEC442 - Electronic Commerce (3)

Develop knowledge of E-commerce concepts and terminology. E-marketplaces, E-commerce economic impacts, market research, company-centric B2B, E-supply chain, corporate portals, E-government, E-learning. Introduction to implementing an E-commerce system. Every semester. Prerequisite: Grade of C or better in ITEC 315 or COSC 241.

5. Discuss how general education requirements will be met, if applicable.

FSU's General Education Program (GEP) consists of a set of Core Skills and Modes of Inquiry that all students must complete, totaling at least 40 credits. The Core Skills category (9 credits) covers foundational competency in writing and math, with students required to earn at least a "C" or better in each course. The Modes of Inquiry portion (31 or more credits) covers Fine & Performing Arts, Humanities, Natural Sciences (with

labs), Social Sciences, Colloquia, and Identity & Difference requirements, ensuring students are exposed to diverse fields and perspectives. Although most GEP courses only require a "D" to pass, students must earn a "C" or above in any Core Skills course.

Aside from the GEP, Frostburg requires students to demonstrate basic fluency in technology before graduation, either by passing a skills exam or completing a designated technology course. Honors students have the option of substituting certain GEP classes with Honors-designated courses. For transfer students, credits earned at other institutions can often be applied toward these requirements, provided they align with FSU's course equivalents. This design ensures all graduates gain essential communication, critical thinking, and breadth of knowledge across liberal arts, sciences, and interdisciplinary areas.

6. Identify any specialized accreditation or graduate certification requirements for this program and its students.

Because the proposed Business Analytics undergraduate concentration will be housed within FSU's Department of Management and Marketing, it will fall within the scope of the existing AACSB accreditation. AACSB is widely recognized as the premier accrediting body for business programs worldwide. The new concentration will be integrated into the business school's existing processes for quality assurance and continuous improvement, ensuring that it meets AACSB standards for curriculum design, faculty qualifications, and student learning outcomes.

There are no additional mandatory graduate certifications specific to this undergraduate concentration. However, upon completing the program, students may choose to pursue industry-recognized certifications to enhance their professional credentials. Common examples include certifications in data analytics software (such as SAS, Microsoft Power BI, Tableau, or AWS data tools) and broader analytics-related credentials (e.g., Certified Analytics Professional [CAP]). While these certifications are not required by either FSU or AACSB, they can offer added competitive advantage in the job market and may be encouraged by faculty or industry partners.

7. If contracting with another institution or non-collegiate organization, provide a copy of the written contract.

N/A

8. Provide assurance and any appropriate evidence that the proposed program will provide students with
clear, complete, and timely information on the curriculum, course and degree requirements, nature of faculty/student interaction, assumptions about technology competence and skills, technical equipment requirements, learning management system

, availability of academic support services and financial aid resources, and costs and payment policies.

FSU's undergraduate Business Administration program (B.S.) clearly outlines its curriculum and concentration options in the academic catalog and on the university website. Students complete a foundation of general education and core business courses, then choose a concentration "to best fulfill [their] personal goals," such as Finance, General Management, Global Business, Human Resource Management, Marketing, or Small Business/Entrepreneurship. A new Data Analytics (Business Analytics) concentration has been introduced within the Business Administration major, with specialized courses added to support it

The academic catalog details all required courses and credits for the major and each concentration, providing a clear roadmap for degree completion. Additionally, FSU's 8-Semester Plans (linked via the Academic Success Network) informs students a term-by-term course plan for each major and concentration, ensuring they understand the sequence of required courses. These resources guarantee that students have up-to-date, complete information on the program structure and degree requirements for the Business Analytics concentration.

FSU emphasizes regular and clear faculty-student interaction, especially for courses offered online or with online components. The university's online learning guidelines state that "student interaction with peers and the instructor is just as important in an online or blended course as it is in the traditional classroom," urging students to use available communication tools (email, discussion boards, chat) to stay engaged. In turn, faculty are expected to facilitate robust interaction: instructors orient students at the start of an online course and identify how and when students will interact with and contact the instructor, providing "frequent assessments and feedback". These policies are typically communicated through course syllabi and online learning orientation. By setting these expectations, FSU ensures that students in the Business Analytics concentration know how they will engage with faculty – whether in person or via the Canvas learning system – and what responsiveness and support to expect throughout their courses.

FSU makes explicit the assumptions about students' technology competencies for online or technology-enhanced coursework. The university advises that students must be comfortable with basic computing skills such as using their FSU email account and navigating the learning management system.

In its Online Learning Responsibilities guidance, FSU notes that success in courses (like those in Business Analytics) may require students to be proactive with technology: for instance, managing their time in a less structured online environment and being able to access course materials electronically

Students are responsible for evaluating their computer setup and ensuring they have the necessary skills and access (reliable internet, required software, etc.) to participate in course activities. By providing this information up front (e.g. during orientation and in course syllabi), FSU makes sure Business Analytics students understand the technical skills they need to succeed in the program.

Information about the technical equipment required for coursework is made available so students can prepare accordingly. FSU informs students that they "are responsible for ensuring that they have access to required hardware, software, and an Internet connection" for any courses with online components. For example, a student in Business Analytics concentration might be expected to have a reasonably up-to-date computer capable of running statistical software or data analysis tools used in their classes. The online student responsibilities documentation explicitly advises learners to verify that their computer and internet setup meets the course needs before classes begin

Additionally, students are directed to obtain any specialized course software or materials listed by instructors. By outlining these requirements on the website and in orientation materials, FSU ensures students have clear and timely notice of the equipment and technology they will need for their Business Analytics coursework.

FSU uses Canvas as its official learning management system for delivering online course content. The Canvas platform is prominently featured in student resources – for instance, the FSU website's instructional technology pages state, "Canvas is FSU's Learning Management System that allows users to access course materials, announcements, assignments, tests, and grades". Students can log in to Canvas directly from the FSU website (a Canvas login link is provided under student resources), and many courses in the Business Analytics concentration will utilize Canvas for posting syllabi, data sets, assignments, and facilitating discussions. FSU provides support and guides for using Canvas , ensuring that students know which platform will host their online learning activities. This information is conveyed during course orientations and on the Online Learning info page, so students understand that Canvas is the hub for their digital coursework delivery.

FSU makes robustly offers academic support services to all students, and these are well-publicized via the Academic Success Network and related offices. Students in the Business Analytics concentration can take advantage of free tutoring and skills support – for example, the FSU Tutoring Center offers "free tutoring for many 100- and 200-level courses as well as writing help for all courses", which would include foundational analytics and math classes. The Academic Success Network site lists resources like the Center for Academic Advising & Retention, the Accessibility & Learning Office, and TRIO Student Support Services, all of which collaborate to help students "get everything you need to graduate". Through these services, students receive personalized assistance (study skills workshops, one-on-one tutoring, advising sessions) and can easily find information on how to access them – the website even answers common questions (e.g. "How can I meet with a tutor?" with links to schedule an appointment). By centralizing this information online and in the undergraduate catalog, FSU ensures Business Analytics students know where to find help with their courses or any academic challenges.

Comprehensive information about financial aid is provided through FSU's official Financial Aid webpage and admissions materials. Students can learn about scholarships, grants, loans, and how to apply for aid in a clear step-by-step manner. FSU emphasizes the importance of the FAFSA (Free Application for Federal Student Aid) as the "most crucial step in applying for financial aid," noting that one cannot receive aid until the FAFSA is submitted and processed. The site guides prospective and current students on aid timelines and eligibility – for instance, roughly 74% of FSU undergraduates receive

some form of financial assistance, underscoring that aid is common and accessible. There are dedicated sub-pages for types of aid, how to apply as an undergraduate, and even a Student Financial Planning Portal for personalized aid management. This information is kept current so that Business Analytics students (and all FSU students) can easily find guidance on financing their education, understand scholarship opportunities, and follow the university's recommended processes for securing financial aid

 (Too bulky – break it down.)FSU ensures transparency in tuition, fees, and payment policies so students can clearly understand their financial responsibilities. The *Admissions & Cost* section of the university website provides a detailed breakdown of undergraduate tuition (including rates for Maryland residents, regional students, and out-of-state students) as well as any additional fees for specialized programs. Students in the Business Analytics program pay standard university tuition, with no extra surcharge for online courses.

The University & Student Billing Office specifies payment deadlines, stating: "All fees must be paid by the start of each semester or by the due date listed on the Statement of Fees." Late payments may lead to schedule cancellation or penalties. Payment policies - including due dates, installment plans, and consequences for missed payments - are clearly outlined on the billing website and in registration materials.

FSU reinforces this transparency by sharing cost and payment details across multiple platforms, such as the academic catalog, billing office site, and orientation communications. This ensures Business Analytics students know the full cost of the program, payment timelines, and available options, helping them plan accordingly and avoid unexpected expenses.

All program-related information, from admission criteria to financial policies, is readily accessible through official FSU resources, including the academic catalog, department pages, and financial aid office. By integrating these details into existing university systems, FSU provides prospective and current students with consistent, up-to-date guidance throughout their academic journey.

9. Provide assurance and any appropriate evidence that
   advertising, recruiting, and admissions materials will clearly and accurately
   represent the proposed program and the services available.

FSU maintains a consistent practice of ensuring accuracy in all advertising, recruiting, and admissions materials for its academic programs. This same standard of transparency and precision will apply to the proposed Business Analytics concentration. The university's official website serves as the primary source of information, providing clear descriptions of each major and concentration, along with curriculum details, career pathways, and admission requirements. As with other AACSB-accredited business concentrations, the Business Analytics concentration will have a dedicated webpage outlining its learning objectives, required courses, and relevant student resources. Updates to the FSU catalog and website will ensure that all information remains current and describes the program's formal structure.

Additionally, FSU's 8-Semester Plans will be developed for the Business Analytics pathway, offering students a clear, term-by-term guide to complete their program.

FSU's Admissions Office plays a key role in accurately promoting academic programs. Each year, the office updates its print and digital recruiting materials, including viewbooks, brochures, and degree search tools, to reflect the most current program offerings. Once the Business Analytics concentration is approved, the next cycle of admissions materials will include its description, ensuring prospective students receive up-to-date and comprehensive information. Admissions counselors will also be briefed on the new concentration to provide accurate guidance during campus tours, recruiting events, and individual student inquiries. Additionally, the Department of Management and Marketing will develop specialized fact sheets and promotional slides for university open houses, highlighting the program features, skills, and career opportunities associated with Business Analytics.

The Department of Management and Marketing at FSU will further enhance awareness of the new concentration through targeted departmental communication. Faculty will distribute informational flyers, conduct advising sessions, and collaborate with the Career and Professional Development Center (CPDC) to emphasize job market opportunities for analytics students. The CPDC and Graduate Services Office will also provide guidance on post-graduate opportunities, including certifications and master's degree pathways, ensuring that students understand how this concentration can support future career or educational goals. Any references to graduate-level study or professional certifications will be clearly distinguished from undergraduate requirements to prevent misleading information.

FSU maintains rigorous quality assurance processes to ensure all program materials remain accurate and up to date. The university conducts an annual catalog review, during which program descriptions, course listings, and admissions requirements are updated. The Provost's Office and Office of Marketing and Communications oversee the accuracy of academic messaging, working closely with faculty and department heads. Additionally, periodic audits of web-based and printed materials will verify that the Business Analytics concentration is represented consistently across all platforms. Any necessary corrections will be made promptly to maintain transparency and clarity.

Through these established procedures—website updates, catalog revisions, admissions material enhancements, and departmental engagement—FSU guarantees that its advertising and recruiting efforts accurately reflect the proposed Business Analytics concentration and the services available to students. By aligning with FSU's broader marketing and accreditation standards, the program's representation will be clear, complete, and continuously refined to provide prospective and current students with the most relevant and precise information.

H. Adequacy of Articulation

1. If applicable, discuss how the program supports articulation with programs at partner institutions. Provide all relevant articulation agreements.

FSU maintains several articulation agreements with community colleges across the state and region, specifically in Business Administration major. These agreements ensure seamless transfer for students into our programs and are publicly accessible at the following link: FSU Transfer Agreements.

In particular, the articulation agreement with:

- Allegany College of Maryland was signed in Fall 2019.
- Garrett College was signed in Spring 2019.
- College of Southern Maryland was signed in Spring 2020.
- Anne Arundel Community College was signed in Spring 2021.
- Cecil College was signed in Fall 2023.

FSU actively engages with ARTSYS, Maryland's Articulation System for Students, updating it with new information to ensure our transfer policies are transparent and aligned with current state policies and legal requirements. Additionally, we review coursework from other institutions regularly to ensure maximum transferability.

As such, all articulation agreements are, and will continue to be, made public on our University's website in accordance with MHEC guidelines.

I. **Adequacy of Faculty Resources** (as outlined in COMAR 13B.02.03.11).

1. Provide a brief narrative demonstrating the quality of program faculty. Include a summary list of faculty with appointment type, <u>terminal degree title and field</u>, academic title/rank, status (full-time, part-time, adjunct) and the course(s) each faculty member will teach in the proposed program.

   FSU is primarily a teaching institution. Faculty members are responsible for teaching 24 credit hours per academic year and for providing service to the department, institution, community, and their respective professions. To maintain and enhance their expertise, faculty are expected to publish peer-reviewed journal articles in their fields of specialization. This scholarly activity ensures they stay current in their disciplines and can offer students real-world applications of course content.

   Current full-time, tenure-track faculty are both academically and experientially qualified to teach at the undergraduate level, while adjunct faculty bring additional expertise from their respective fields. A list of these faculty members is provided in Table 7.

Table 7: Faculty Resources for Business Analytics Concentration

Faculty Member	Terminal Degree	Academic Title/Rank	Status	Courses
Assyad Al-Wreikat	Ph.D., Economics	Tenured Associate Professor	Full-time	ACCT 365
Thuong N Harvison	Ph.D., Finance	Tenure-track Assistant Professor	Full-time	FINA 410; FINA 371; FINA 475

Dong Wook Huh	Ph.D./HDR Strategic Management	Tenured Associate Professor	Full-time	MGMT 301; MGMT 302; MGMT 402; BMIS 455
Sudipto Sarkar	Ph.D., Marketing	Tenure-track Assistant Professor	Full-time	MKTG 468; MKTG 462; MKTG 467
Joanna Shore	DBA, Information Systems	Tenured Associate Professor	Full-time	MGMT 402; BMIS 455
Oleg Kucher	Ph.D., Natural Resource Economics	Tenured Associate Professor	Full-time	ECON 305; ECON 460
Busra Keles Cadenazzi	Ph.D., Industrial Engineering	Tenured Associate Professor	Full-time	MGMT 301; MGMT 302; MGMT 402; BMIS 455
Lei Ye	Ph.D., Marketing	Tenured Professor	Full-time	MKTG 468; MKTG 462; MKTG 467
Yiming Zhuang	Ph.D., Supply Chain Management	Tenure-track Assistant Professor	Full-time	MGMT 301; MGMT 302; MGMT 402; BMIS 455
Michael Monahan	Ed.D., Leadership Studies	Tenured Professor	Full-time	MGMT 391; MGMT 494; MGMT 499
Ying (Joy) Zheng	D.Sc., Information Technology	Tenured Associate Professor	Full-time	DTSC 201; DTSC 301; DTSC 401; COSC 240
Yuechen (Peter) Chen	Ph.D., Computer Engineering	Tenure-track Assistant Professor	Full-time	COSC 130; COSC 300; ITEC 442
Zhijiang Chen	D.Sc., Information Technology	Tenure-track Assistant Professor	Full-time	ITEC 345; ITEC 442
Rebecca Flinn	M.S., Computer Science	Lecturer	Full-time	ITEC 315
Wenjuan (Wendy) Xu	Ph.D., Information Technology	Tenured Professor	Full-time	ITEC 360

2. Demonstrate how the institution will provide ongoing pedagogy training for faculty in evidenced-based best practices, including training in:

   a) Pedagogy that meets the needs of the students

   FSU's Center for Teaching Excellence offers ongoing training and professional development in pedagogy to all faculty by. The Center hosts an annual regional conference on teaching and learning each January, conducts yearly teaching orientations for new faculty, and offers periodic workshops on various topics throughout the academic year.

   Additionally, the College and each academic department supports faculty development within their respective disciplines by encouraging participation in regional and national conferences.

   b) The learning management system

   FSU uses Canvas as its Learning Management System. The Office of

Instructional Design and Technology provides training and support through the onboarding process for new faculty as well as regularly throughout the year.

c)   Evidenced-based best practices for distance education, if distance education is offered

FSU is a member of both the Maryland Distance Learning Association and Quality Matters™, a recognized leader in online education quality assurance. All faculty training is grounded in Quality Matters standards, which emphasize best practices in course design, delivery, and assessment.

Before teaching online, faculty are required to complete the Teaching Online Certification course. This program teaches faculty to align course-level objectives with student learning outcomes through a backward design model. By identifying the desired results, determining evidence-based assessments, and planning effective learning experiences, instructors ensure students achieve the intended outcomes. Faculty also learn how to structure content into learning units (modules) that align with course objectives and outcomes. Additionally, the training includes strategies for enhancing student engagement and underscores the importance of instructor presence in online courses.

J.   Adequacy of Library Resources (as outlined in COMAR 13B.02.03.12).

1. Describe the library resources available and/or the measures to be taken to ensure resources are adequate to support the proposed program.

The Lewis J. Ort Library at FSU (FSU) offers an extensive collection of thousands of resources across multiple disciplines, adequately supporting both undergraduate and graduate academic programs. Among its many electronic resources are Academic Search Ultimate, which provides access to full-text articles, statistical data, and reference materials. The Library also provides access to business-related databases Business Source Complete, IBISWorld Industry Intelligence, Mergent Market Atlas, Nexis Uni, and Statista. Overall, the library subscribes to databases containing approximately 72,000 full text journals, magazines and newspapers; another 150,000-plus peer-reviewed open access resources are linked to citations from these databases. Over 305,000 electronic books, 245,000 online government documents, and over 85,000 on-demand streaming videos are also made available to students, faculty, and staff.

FSU students, faculty, and staff can access the Ort Library's databases and other electronic resources at any time through the SearchCat system. The library's holdings are also searchable via SearchCat. A cooperative lending program between institutions in the University System of Maryland (USM) grants borrowing privileges for circulating print materials at all participating libraries, and interlibrary loan extends these privileges to libraries across the United States.

K. Adequacy of Physical Facilities, Infrastructure and Instructional Equipment (as outlined in COMAR13B.02.03.13)

1. Provide an assurance that physical facilities, infrastructure and instruction equipment are adequate to initiate the program, particularly as related to spaces for classrooms, staff and faculty offices, and laboratories for studies in the technologies and sciences.

   FSU assures that its physical facilities, infrastructure, and instructional equipment are appropriate to support the initiation and sustainability of the program. The university provides well-equipped classrooms, faculty and staff offices, and specialized laboratory spaces that align with the needs of the curriculum. Classrooms are equipped with modern instructional technology, including projectors, smartboards, and high-speed internet connectivity, to facilitate both in-person and hybrid learning environments. Additionally, faculty offices are available within respective academic departments to support student advising and faculty collaboration.

   For programs requiring technology integration, computer labs and high-performance computing resources are accessible to students and faculty, ensuring hands-on experience with industry-standard software and data analysis tools. The university's Ort Library serves as a critical academic resource, offering digital databases, research materials, and collaborative learning spaces that enhance student engagement. Laboratories for science and technology-related courses are outfitted with specialized equipment and research tools that meet or exceed state and accreditation standards.

   Moreover, FSU continuously invests in infrastructure enhancements and facility upgrades, ensuring that instructional spaces remain modern, accessible, and conducive to academic success. The institution's commitment to maintaining high-quality physical resources ensures that the program will have the necessary facilities to support student learning, faculty research, and instructional excellence from its initiation and beyond.

2. Provide assurance and any appropriate evidence that the institution will ensure students enrolled in and faculty teaching in distance education will have adequate access to:

   a)   An institutional electronic mailing system, and
   b)   A learning management system that provides the necessary technological support for distance education

   At FSU, both students enrolled in and faculty teaching distance education courses have adequate access to essential technological resources, including an institutional electronic mailing system and a learning management system (LMS) with necessary technological support.

   All students and faculty at FSU are provided with an official FSU email account through Microsoft Outlook, ensuring seamless communication across academic and administrative functions. The university's IT department maintains this system, providing 24/7 access, spam protection, and integration with other institutional platforms such as

the learning management system, advising portals, and campus-wide announcements. Distance education students use this institutional email system for course-related communication, faculty correspondence, and administrative interactions, ensuring they receive the same level of access and support as on-campus students.

FSU utilizes Canvas as its primary Learning Management System (LMS) to support distance education courses. Canvas provides a robust platform for delivering course materials, engaging in discussions, submitting assignments, and completing assessments. Faculty teaching in online or hybrid modalities have access to instructional design support, multimedia content creation tools, and online testing features.

To ensure adequate technological support, the university provides:

- 24/7 IT Help Desk Support for students and faculty experiencing technical difficulties.
- Training workshops and instructional design assistance to help faculty develop engaging online courses.
- Integration with third-party educational tools, such as video conferencing software (Zoom, WebEx), proctoring services for assessments, and plagiarism detection tools.
- Accessibility accommodations, including compatibility with screen readers and captioning for video content, ensuring compliance with ADA and WCAG standards.

Through these institutional resources, FSU guarantees that distance education students and faculty have reliable access to secure electronic communication, comprehensive digital learning platforms, and responsive technical support, allowing for an effective and inclusive online learning experience.

L. Adequacy of Financial Resources with Documentation (as outlined in COMAR 13B.02.03.14)

Table 8. Resources Required

Resources Categories	Year 1	Year 2	Year 3	Year 4	Year 5
1.Reallocated Funds[1]	0	0	0	0	0
2. Tuition/Fee Revenue[2] (c+g below)	$22,242	$52,934	$84,843	$125,872	$160,480
a. #F.T Students	3	7	11	16	20
b. Annual Tuition/Fee Rate	$7,414	$7,562	$7,713	$7,867	$8,024
c. Annual Full Time Revenue (a x b)	$22,242	$52,934	$84,843	$125,872	$160,480
d. # Part Time Students	0	0	0	0	0
e. Credit Hour Rate	0	0	0	0	0
f. Annual Credit Hours	0	0	0	0	0
g. Total Part Time Revenue (d x e x f)	0	0	0	0	0

3. Grants, Contracts, & Other External Sources[3]	0	0	0	0	0
4. Other Sources	0	0	0	0	0
TOTAL (Add 1 – 4)	$22,242	$52,934	$84,843	$125,872	$160,480

2. Tuition revenue based on projected students at annual tuition for full-time.
2.a. In-coming class sizes estimated as 3, 4, 5, 6, and 7 for Years 1-5. Retention rates of
92.2% based on the most recent data at FSU.
2.b. From Enrollment Management (03.13.2025); We assume a 2% increase from year to year.
2.c. FTE x tuition and fee

Table 8. Expenditure

Expenditure Categories	Year 1	Year 2	Year 3	Year 4	Year 5
1. Total Faculty Expenses (b + c below)	0	0	$57,713	$57,713	$57,713
a. # FTE	0	0	0.5	0.5	0.5
b. Total Salary	0	0	$42,750	$42,750	$42,750
c. Total Benefits	0	0	$14,963	$14,963	$14,963
2. Total Administrative Staff Expenses (b + c below)	0	0	0	0	0
a. # FTE	0	0	0	0	0
b. Total Salary	0	0	0	0	0
c. Total Benefits	0	0	0	0	0
3. Total Support Staff Expenses (b + c below)	0	0	$16,264	$16,264	$16,264
a. # FTE	0	0	0.25	0.25	0.25
b. Total Salary	0	0	$12,047	$12,047	$12,047
c. Total Benefits	0	0	$4,217	$4,217	$4,217
4. Equipment	$1,500	$1,500	$1,500	$1,500	$1,500
5. Library	0	0	0	0	0
6. New or Renovated Space	0	0	0	0	0
7. Other Expenses	0	0	0	0	0
TOTAL (Add 1 – 7)	$1,500	$1,500	$75,477	$75,477	$75,477

1.Faculty: An additional 0.5 FTE faculty member will be required in Year 3 to teach two courses each semester once enrollment reaches a minimum of 10 students. This represents the total faculty expense of $57,713 annually (salary plus benefits).
2.Administrative Staff: No administrative staff positions are anticipated for this program.
3.Support Staff: To ensure high-quality support and student success, a part-time staff member (0.25 FTE or 20 hours per week) will be hired in Year 3. This position accounts for a total annual support staff expense of $16,264 (salary plus benefits).
4.Equipment: Each year, $1,500 is allocated to purchase data analytics software and related equipment.

Program expenditures are expected to be limited. Minimal technical equipment courses will be required as this program leverages the already existing undergraduate program resources.

Program resources will consistently exceed projected expenditures generating modestly escalating levels of surplus in the first five years.

M. Adequacy of Provisions for Evaluation of Program (as outlined in COMAR 13B.02.03.15).

1.   Discuss procedures for evaluating courses, faculty and student learning outcomes.

   FSU has a structured and institutionalized faculty evaluation process designed to ensure high-quality instruction and continuous improvement. Student evaluations are collected for each course through the university's learning management system (Canvas), using a standardized evaluation form applied across all courses. These evaluations include both quantitative scores and qualitative feedback, which are aggregated and presented to instructors for each course, allowing them to reflect on and enhance their teaching effectiveness. Additionally, the university integrates faculty evaluation with student learning outcomes assessment, ensuring alignment with institutional and disciplinary standards.

   At the college level, faculty evaluations may be informed by accrediting bodies, particularly within the fields of Business and Education, which follow external accreditation guidelines, while the College of Liberal Arts and Sciences utilizes its Assessment Council to oversee student learning and faculty contributions to academic success. At the institutional level, the Student Learning Assessment Advisory Group (SLAAG) and Graduate Learning Assessment Advisory Group (GLAAG) play a critical role in evaluating student learning outcomes within the framework of the Institutional Effectiveness Cycle. These bodies ensure that faculty effectiveness is measured not just through student feedback but also through learning assessments that track student achievement over time. By incorporating student evaluations, disciplinary accreditation standards, and institutional assessment initiatives, FSU maintains a comprehensive approach to faculty evaluation, supporting ongoing professional development and instructional excellence.

2.   Explain how the institution will evaluate the proposed program's educational effectiveness, including assessments of student learning outcomes, student retention, student and faculty satisfaction, and cost-effectiveness.

   The program review schedule serves as the foundation for assessment initiatives through its identification of priorities for the coming cycle. Halfway through the cycle, the Office of Assessment and Institutional Research (AIR) collects information on the status of assessment activities using a midterm review template. Programs undergoing review in any given year must submit the Program Review Self-Study, External Review Report, and Certificate to AIR.

N. Consistency with the State's Minority Student Achievement Goals (as outlined in COMAR 13B.02.03.05).

1. Discuss how the proposed program addresses minority student access & success, and the institution's cultural diversity goals and initiatives.

   FSU is a public institution committed to creating a campus environment that values human diversity, reflecting its status as a multi-cultural campus where diversity is highly valued. The university and its programs have clear goals to recruit and support minority students, as evidenced by FSU's Core Value Statement: "FSU is committed to developing cultural competence and cultivating understanding and respect for a diversity of experiences and worldviews that encourage each person's ability to 'take the perspective of the other.'" Guided by a University Council on Diversity, Equity, and Inclusion (UCDEI) led by the University President, and supported by initiatives aimed at increasing diversity among faculty and staff, Frostburg employs a multifaceted approach to recruit, support, and retain underrepresented populations that goes beyond standard mission statements. Proactive outreach in underserved regions ensures that prospective applicants receive targeted guidance, while culturally specific scholarships and need-based aid ease financial barriers. On campus, TRIO Student Support Services provides tutoring, advising, and workshops tailored to the needs of first-generation and low-income students, complemented by student organizations such as the Black Student Alliance and Latin American Student Organization, which celebrate heritage and nurture leadership skills. Meanwhile, frequent cultural events, bias-awareness programs, and a streamlined discrimination-reporting mechanism foster an inclusive environment in coordination with the UCDEI. Faculty diversity remains a top priority, with active recruitment at historically Black institutions and ongoing cultural competence training for instructors. Taken together, these programs ensure that minority students not only enroll at FSU but also thrive academically and socially in a welcoming community dedicated to representation, equity, and lifelong success.

   The Business Analytics program at FSU will specifically address minority student access and success through targeted initiatives aligned with the university's commitment to diversity. The program will develop specialized recruitment pathways in collaboration with organizations serving underrepresented communities in analytics and data science fields, creating direct pipelines for diverse talent. Financial support will include dedicated scholarships for minority students pursuing business analytics careers, with partnerships established with companies seeking to diversify their analytics workforce. The curriculum will incorporate case studies and datasets that address diverse populations' concerns, such as analyses of healthcare disparities or economic development in underserved communities, making course content relevant to students from varied backgrounds. Mentorship opportunities will connect minority students with industry professionals from similar backgrounds, while alumni networks will be cultivated to provide diverse role models in analytics careers. Regular assessment of minority student performance in analytics coursework will help identify and address any achievement gaps through targeted support, ensuring the program not only attracts diverse students but supports their success through graduation and career placement.

O. Relationship to Low Productivity Programs Identified by the Commission:
1. If the proposed program is directly related to an identified low productivity program, discuss how the fiscal resources (including faculty, administration, library resources and general operating expenses) may be redistributed to this program.

N/A

P. Adequacy of Distance Education Programs (as outlined in COMAR 13B.02.03.22)
1. Provide affirmation and any appropriate evidence that the institution is eligible to provide Distance Education.
2. Provide assurance and any appropriate evidence that the institution complies with the C-RAC guidelines, particularly as it relates to the proposed program.

Since 2003, FSU has significantly expanded its online offerings, growing from a few courses initially to a sizable portion of its course inventory each semester. The university's commitment to quality online delivery is demonstrated through the following initiatives:

- NC-SARA Membership
  FSU's membership in the National Council for State Authorization Reciprocity Agreements (NC-SARA) ensures adherence to the Principles of Good Practice for online education. This benefits distance learners by verifying the institution's commitment to high standards.
- Online Teaching Certification
  FSU policy requires faculty to complete a six-week online teaching certification program. Developed by the university's instructional design team and based on Quality Matters standards, this program emphasizes best practices for course design and delivery.
- Professional Development
  The Instructional Design and Delivery department regularly offers individual and group sessions to help faculty enhance their teaching skills and stay current with evolving best practices.
- Instructional Design Support
  Instructional designers work closely with faculty to develop, deliver, and assess online courses, ensuring ongoing support and quality improvement for both instructors and students.

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ACADEMIC PROGRAM ARTICULATION AGREEMENT BETWEEN
COLLEGE OF SOUTHERN MARYLAND
AND
FROSTBURG STATE UNIVERSITY REGARDING TRANSFER FROM ASSOCIATE OF SCIENCE DEGREE IN DATA SCIENCE TO BACHELOR OF SCIENCE IN BUSINESS ADMINISTRATION (CONCENTRATION IN BUSINESS ANALYTICS)

This Academic Program Articulation Agreement ("Agreement") is entered into by and between Allegany College of Maryland (the "Sending Institution") and Frostburg State University (the "Receiving Institution") (collectively, the "Institutions") to facilitate the transfer of academic credits from Associate of Science in Data Science, HEGIS code 498002 and CIP code 307001 for the completion of Bachelor of Science in Business Administration (concentration in Business Analytics), HEGIS code 050601 and CIP code 520201.

A. Qualifying Students

This Agreement pertains to the transfer of "Qualifying Students", *i.e.*, those students who:
1. Have successfully completed the program at the Sending Institution;
2. Are enrolled in the Sending Institution, in good standing; and
3. Are accepted for admission to the Receiving Institution

B. Responsibilities of the Institutions

The Institutions agree to implement the transfer of Qualifying Students in accordance with applicable law and the following requirements and protocols:

1. A Qualifying Student may transfer from the Sending Institution into the Receiving Institution for the completion of the Program.

2. Courses for which the Receiving School will accept credits towards completion of the Program include:

College of Southern Maryland			Frostburg State University			
Course Number	Course Name	Credits	Course Number	Course Name	Credits	Applied to*
Year One, 1st Semester						
ENG 1010	Composition and Rhetoric	3	ENGL 101	First-Year Composition	3	GEP Core
CSC 1100	Practical Programming with Python	3	COSC 130	Introduction to Programming	3	Major Elective
MTH 1015	Introduction to Statistics	3	MATH 109	Probability and Statistics	3	Major

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College of Southern Maryland			Frostburg State University			
Course Number	Course Name	Credits	Course Number	Course Name	Credits	Applied to*
ITS 1055	Introduction to Computing	3	COSC 100	Introduction to Computer Science	3	Tech Fluency and GEP Group E
COM 1650	Intro to Public Speaking*	3	STCO 122	Introduction to Public Communication	3	Major and GEP Group B
	Total	15		Total	15	
Year One, 2nd Semester						
ENG 1020	Composition & Literature	3	ENGL 150	Introduction to Literature	3	GEP Group B
ITS 2480	Foundations of Data Science	3	MGMT 200	Intro to Data Analytics	3	Major Core
MTH 1200	Calculus I and Analytic Geometry	4	MATH 236	Calculus I	4	GEP Core
BIO 1060/ 1060L	Principles of Biology I*	4	BIOL 149	General Biology I	4	GEP Group C
	Total	14		Total	14	
Year Two, 1st Semester						
CSC 2591	Computer Science I	4	COSC 240	Computer Science I	4	General elective
MTH 1210	Calculus II	4	MATH 237	Calculus II	4	General elective
ECN 2020	Principles of Microeconomics*	3	ECON 202	Microeconomics	3	GEP Group D
SCE 1010	Scientific Reasoning and the Modern World*	3	IDIS 160	Science and Technology	3	GEP Group C
GRY 1020	Introduction to Cultural Geography*	3	GEOG 104	Human Geography	3	GEP Group F
	Total	17		Total	17	
Year Two, 2nd Semester						
CSC 2592	Computer Science II	4	COSC 241	Computer Science II	4	General elective
ITS 2450	Business Analytics and Data Visualization	3	DTSC 201	Intro to Data Analysis & Visualization	3	Major Elective
MTH 2500	Introduction to Discrete Math	3	COSC 102	Foundations of Computer Science	3	GEP Group E
ITS 1120	Introduction to Database*	3	ITEC 345	Database Systems I	3	Major Elective
ECN 2025	Principles of Macroeconomics*	3	ECON 201	Macroeconomics	3	GEP Group D
	Total	16		Total	16	
Total Credits at CSM: 62						

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Frostburg State University			
Course Number	Course Name	Credits	Applied to*
Year Three, 1st Semester			
ACCT 211	Financial Accounting	3	Major
BLAW 291	Legal Environment of Business	3	Major
MGMT 251	Knowledge and App of Management Skills	3	Major
MKTG 261	Principles of Marketing	3	Major
MGMT 301	Data Modeling in Business	3	Major
	Total:	15	
Year Three, Second Semester			
ACCT 212	Managerial Accounting	3	Major
MGMT 355	Operations and Supply Chain Mgmt.	3	Major
MGMT 356	Leadership and Power in Global Orgs.	3	Major
MGMT 302	Applied Business Analytics	3	Major
FINA 370	Corporate Finance	3	Major
	Total:	15	
Year Four, 1st Semester			
ACCT 365	Accounting Analytics	3	Major
FINA 470	Financial Modeling	3	Major
MGMT 405	Corporate Social Responsibility	3	Major
COSC 220	Software Apps. For Business	3	Major
DTSC 301	Data Modeling, Wrangling and Appl.*	3	Major Elective
	Total:	15	
Year Four, 2nd Semester			
MKTG 468	Digital Marketing Analytics	3	Major
MGMT 485	Strategic Management	3	Major
DTSC 401	Data Privacy and Ethics in Data Science*	3	Major Elective
ART 100	Art Appreciation*	3	GEP Group A
ENGL 330	Business Writing	3	GEP Core
	Total:	15	
Total Credits at FSU: 60			

*One of multiple course options possible to meet this requirement. Students should consult with their advisor on course selection and visit ARTSYS to view all possible course options for this category.

**One of multiple course options possible to meet this requirement. May vary based on course offerings schedule for that semester.

3. The Receiving Institution shall designate, and shall provide to the Sending Institution, the contact information for a staff person at the Receiving Institution who is responsible for the

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oversight of the transfer of Qualifying Students. The Sending Institution shall designate, and shall provide to the Receiving Institution, the contact information for a staff person at the Sending Institution who is responsible for the oversight of the transfer of Qualifying Students.

	Sending Institution	Receiving Institution
Name of staff person responsible for oversight	Marie Domenech	Dr. Linda Steele
Title of staff person	Assistant Director, Registrar's Office	Transfer and Articulation Coordinator
Email address	mddomenech@csmd.edu	lsteele@frostburg.edu
Telephone Number	301-934-7588	301-687-4137

Should the staff person or position change, the institution will promptly provide new contact information to the partner institution and inform the Maryland Higher Education Commission of the change.

Additional contact information:

[Role & Responsibilities of persons listed here]	Sending Institution	Receiving Institution
Name of person	Lakisha Ferebee	Dr. Yiming Zhuang
Title of person	Chair of Technology	Assistant Professor of Management
Email address	ldferebee@csmd.edu	yzhuang@frostburg.edu
Telephone Number	240-725-5476	301-687-4376

4. If the Qualifying Student is using federal Title 38 VA Education Benefits (GI Bill® Education Benefits), the Institutions shall adhere to all applicable U.S. Department of Veterans Affairs' regulations, including the regulations governing the awarding prior credit, as regulated under Title 38, Code of Federal Regulations, Sections 21.4253(d)(3) and 21.4254(c)(4).

5. Each Institution shall adhere to all applicable transfer requirements set forth in the Annotated Code of Maryland and the Code of Maryland Regulations.

6. Each Institution shall advise students regarding transfer opportunities under this Agreement, and shall advise students of financial aid opportunities and implications associated with the transfer.

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7. Either Institution that makes changes to program requirements must inform the partner institution immediately. The articulation agreement should be updated to reflect the changes and forwarded to the Maryland Higher Education Commission.

C. Term and Termination

1. This agreement shall be effective for two years after the date that it is signed by the appropriate and authorized representatives of each Institution.

2. Either Institution may, at its sole discretion, terminate this Agreement upon delivering 90 days written notice to the other Institution and the Maryland Higher Education Commission. The parties agree that students currently enrolled in the program at the time of termination shall be permitted to complete the program as described herein.

3. Both Institutions agree to meet once every two year(s) to review the terms of this agreement.

D. Amendment

1. This Agreement constitutes the entire understanding and agreement of the Institutions with respect to their rights and obligations in carrying out the terms of the Agreement, and supersedes any prior or contemporaneous agreements or understandings.

2. This Agreement may be modified only by written amendment executed by both Institutions.

E. Governing Law

This Agreement shall be governed by, and construed in accordance with, the laws of the State of Maryland.

F. Counterparts

This Agreement may be executed in counterparts, each of which shall be deemed to be an original, but all of which, taken together, shall constitute one and the same agreement.

G. Notice of Agreement

1. The Institutions agree to provide a copy of this Agreement, with any amendments, to the Maryland Higher Education Commission.

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2. The Institutions agree to provide copies of this Agreement to all relevant individuals and departments of the Institutions, including but not limited to students, academic department chairs participating in the transfer, offices of the president, registrar's offices, and financial aid offices.

H. No Third-Party Beneficiaries

There are no third-party beneficiaries to this Agreement.

I. Representations and Warranties of the Parties

Both Institutions represent and warrant that the following shall be true and correct as of the Effective Date of this Agreement, and shall continue to be true and correct during the term of this Agreement:

1. The Institutions are and shall remain in compliance with all applicable federal, state, and local statutes, laws, ordinances, and regulations relating to this Agreement, as amended from time to time.

2. Each Institution has taken all action necessary for the approval and execution of this Agreement.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed by their duly authorized representatives.

A.S. in DATA SCIENCE/B.S. IN BUSINESS ADMINISTRATION (Concentration in Business Analytics)

College of Southern Maryland   Frostburg State University

By: _____   By: _____
     Dr. Yolanda S. Wilson   Darlene Brannigan Smith, Ph.D.
     President   President

_____   _____
Date   Date

_____   _____
Dr. Tacy Harris   Dr. Michael Mathias
Vice President of Student Excellence   Provost and Vice President of
and Success   Academic Affairs

_____   _____
Date   Date

_____   _____
Dr. Bernice Brezina   Dr. Sudhir Singh
Dean of STEM and Professional Studies   Dean, Business, Engineering, Computing
                                                              & Analytics

_____   _____
Date   Date