UNIVERSITY SYSTEM of MARYLAND

Board of Regents
Committee on Education Policy and Student Life and Safety
Thursday, September 4, 2025 – 9:30am
Zoom

AGENDA FOR PUBLIC SESSION

Call to Order — Chair Gourdine

1) Program Proposals (action)
   a) University of Maryland, Baltimore County: M.A. in Applied Behavior Analysis
   b) University of Maryland, Baltimore County: M.S. in Applied Data Science

2) Towson University: Proposal for a College of Graduate Studies (action)

3) EPSLS Overview: Annual EPSLS Bylaws and Charge Review (action)

4) Update on Digital Accessibility (information)

5) Report on Academic Program Actions Delegated to the Chancellor, AY 2024-2025 (information)

6) Tentative Annual Agenda and Work Plan, 2025-2026 (information)

7) Adjourn (action)

UNIVERSITY SYSTEM of MARYLAND

BOARD OF REGENTS
SUMMARY OF ITEM FOR ACTION, INFORMATION, OR DISCUSSION

TOPIC: University of Maryland, Baltimore County (UMBC) Proposal for a Master of Arts (MA) in Applied Behavior Analysis

COMMITTEE: Education Policy and Student Life and Safety

DATE OF COMMITTEE MEETING: September 4, 2025

SUMMARY: The UMBC Department of Psychology proposes launching a Master of Arts (M.A.) in Applied Behavior Analysis to address growing regional and national needs for qualified behavior analysts. The M.A. in Applied Behavior Analysis is a non-thesis, 36-credit program including 12 courses: eight lecture/seminar courses, two practicum courses, and two capstone courses. Core areas include principles of behavior, research methods, conceptual analysis, applied behavior analysis, basic behavior analysis, and ethics.

Offered at UMBC's Catonsville campus, the program will provide knowledge of contemporary topics in the field, critical thinking and problem-solving skills, and mastery of technologies necessary to conduct research. The curriculum is a Verified Course Sequence and accredited by the Association for Behavior Analysis International. Graduates will be qualified to sit for the international credentialing examination to become a Board-Certified Behavior Analyst (BCBA) and will be eligible to apply for licensure in the state of Maryland as a Licensed Behavior Analyst. Demand for behavior analysts is high and growing, partly driven by the effectiveness of ABA in treating autism spectrum disorder and widespread insurance mandates. In Maryland, over 2,300 BCBA jobs and over 6,100 jobs in the greater DMV region have been posted in recent years. UMBC is well-positioned to offer an affordable, accessible program to contribute to meeting this critical workforce need.

ALTERNATIVE(S): The Regents may not approve the program or may request further information.

FISCAL IMPACT: No additional funds are required. The program can be supported by the projected tuition and fee revenue.

CHANCELLOR'S RECOMMENDATION: That the Education Policy and Student Life and Safety Committee recommend that the Board of Regents approve the proposal from UMBC to offer the MA in Applied Behavior Analysis.

COMMITTEE RECOMMENDATION:	DATE: September 4, 2025
BOARD ACTION:	DATE:
SUBMITTED BY: Alison M. Wrynn 301-445-1992	awrynn@usmd.edu

Office of the Provost
University of Maryland, Baltimore County
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Baltimore, MD 21250

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August 1, 2025

Jay Perman, M.D.
Chancellor
University System of Maryland
3300 Metzerott Road
Adelphi, MD 20783

Dear Chancellor Perman:

UMBC's Department of Psychology is pleased to submit a proposal to establish a Master of Arts (M.A.) in Applied Behavior Analysis.

The M.A. in Applied Behavior Analysis is designed to meet the growing demand for highly trained behavior analysts in Maryland and beyond. It includes a Verified Course Sequence accredited by the Association for Behavior Analysis International, making it one of only 27 such master's programs worldwide. The curriculum combines core academic coursework with practicum and capstone experiences, preparing students with the theoretical knowledge, ethical grounding, and applied skills needed to advance in the field. It will be delivered at UMBC's Catonsville campus, offering students an affordable and accessible pathway to the behavioral health workforce regionally and nationally.

Thank you very much for your consideration of this request.

Sincerely,

Manfred H. M. van Dulmen
Provost and Senior Vice President for Academic Affairs

Cc: Crystal Williams, Assistant Vice Provost for Curriculum Development
Yonatan Harris, Executive Assistant to the Vice Provost for Academic Affairs

UNIVERSITY SYSTEM OF MARYLAND INSTITUTION PROPOSAL FOR

X	New Instructional Program
	Substantial Expansion/Major Modification
	Cooperative Degree Program
X	Within Existing Resources, or
	Requiring New Resources

UMBC

Institution Submitting Proposal

Applied Behavior Analysis

Title of Proposed Program

Master of Arts (MA)	Fall 2026
Award to be Offered	Projected Implementation Date
202099	42.2814
Proposed HEGIS Code	Proposed CIP Code
Department of Psychology	Crystal Williams
Department in which program will be located	Department Contact
410-455-8907	Crysw1@umbc.edu
Contact Phone Number	Contact E-Mail Address
Manfred H. M. van Dulmen Provost and Senior Vice President for Academic Affairs	6/10/2025 Date

Office Use Only: PP#

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

Institution Submitting Proposal	UMBC

Each action below requires a separate proposal and cover sheet.

- (●) New Academic Program
- ( ) New Area of Concentration
- ( ) New Degree Level Approval
- ( ) New Stand-Alone Certificate
- ( ) Off Campus Program
- ( ) Substantial Change to a Degree Program
- ( ) Substantial Change to an Area of Concentration
- ( ) Substantial Change to a Certificate Program
- ( ) Cooperative Degree Program
- ( ) Offer Program at Regional Higher Education Center

Payment Submitted: (●) Yes ( ) No | Payment Type: (●) R*STARS # 3209268 ( ) Check # | Payment Amount: 850.00 | Date Submitted: 08/01/2025

Department Proposing Program	Department of Psychology
Degree Level and Degree Type	Graduate, Master of Arts (MA)
Title of Proposed Program	Applied Behavior Analysis
Total Number of Credits	36
Suggested Codes	HEGIS: 202099 CIP: 42.2814
Program Modality	(●) On-campus ( ) Distance Education (fully online) ( ) Both
Program Resources	(●) Using Existing Resources ( ) Requiring New Resources
Projected Implementation Date (must be 60 days from proposal submisison as per COMAR 13B.02.03.03)	(●) Fall ( ) Spring ( ) Summer Year: 2026
Provide Link to Most Recent Academic Catalog	URL: https://catalog.umbc.edu/
Preferred Contact for this Proposal	Name: Crystal Williams Title: Assistant Vice Provost for Curriculum Development Phone: 410-455-8907 Email: crysw1@umbc.edu
President/Chief Executive	Type Name: Manfred H. M. van Dulmen Provost and Senior Vice President for Academic Affairs Signature: [signature] Date: 8/1/2025
	Date of Approval/Endorsement by Governing Board:

Revised 4/2025

Program Proposal: M.A., Psychology—Applied Behavior Analysis, UMBC

Narrative

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. https://about.umbc.edu/**

The UMBC Department of Psychology proposes to launch a Master of Arts (M.A.) in Applied Behavior Analysis. The Psychology department works closely with community partners to build external relations to ensure that we are responsive to the regional and national needs of our professional practice and to provide affordable, accessible ways to effectively enhance the professionalism and diversity of Maryland's behavior analyst workforce.

Offered at UMBC's campus in Catonsville, the proposed M.A. in Applied Behavior Analysis will be a non-thesis degree consisting of 12 courses/36 credits (eight traditional lecture/seminar style courses, two practicum courses, and two capstone courses). Core courses focus on: (a) principles of behavior, (b) research methods, (c) conceptual analysis, (d) applied behavior analysis, (e) basic behavior analysis, and (f) ethics. The curriculum has been deemed a "Verified Course Sequence," which means that our curriculum has been assessed by the Association for Behavior Analysis International, our flagship organization, and determined to meet specific coursework requirements and faculty standards. In addition, the curriculum is accredited by the Association for Behavior Analysis International, making it one of only 27 accredited training programs, in the world, at the master's level. The curriculum promotes knowledge of contemporary topics in the field, critical thinking and problem-solving skills, and mastery of technologies necessary to conduct research. In addition, accreditation requires that our students complete a master's thesis or equivalent. Our students will complete a *Capstone* project to develop competence in defining a research problem, designing a method to address the problem, and conducting and reporting an investigation that carries out the method to conclusion. Upon graduation, students will be qualified to sit for the international credentialing examination to become a Board Certified Behavior Analyst (BCBA) and will be eligible to apply for licensure in the state of Maryland as a Licensed Behavior Analyst.

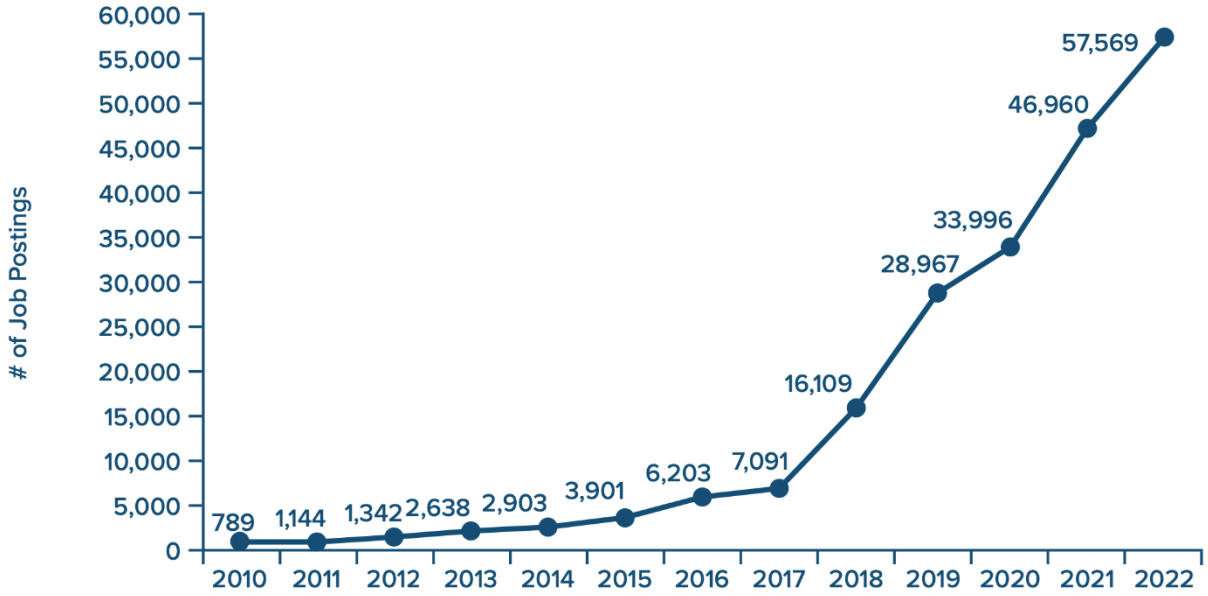
Demand for behavior analysts is increasing: Annual nationwide demand for individuals holding the BCBA certification has increased each year since 2010, with a 23% increase from 2021 to 2022 ([1]Behavior Analyst Certification Board, 2023). The pronounced

[1] Behavior Analyst Certification Board. (2023). US employment demand for behavior analysts: 2010–2022. Littleton, CO: Author.

Annual Demand for BCBA Certification

The following graph depicts the annual number of job postings nationwide over the past 13 years (2010–2022) that either required or preferred BCBA/BCBA-D certification.

Note: There are currently 36 states that license behavior analysts and 1,345 job postings in 2022 that either required or preferred a license to practice behavior analysis.



increase in demand can be explained as follows: (a) Applied Behavior Analysis is recognized as one of the most effective intervention approaches to address challenges associated with a diagnosis of autism spectrum disorder, (b) as of 2020, the Centers for Disease Control estimates that 1:36 children has been identified as having autism spectrum disorder, and (c) nearly every state has an autism insurance mandate, which requires certain insurers to provide coverage for autism spectrum disorder. In 2021, there were 1,110 job postings, in Maryland, alone, for individuals holding the BCBA credential. In 2022, there were 1,211 job postings for individuals holding the BCBA credential. When considering the greater DMV region there were 6,149 jobs posted for BCBAs in 2021 and 2022. Accordingly, as a public research university, UMBC is ideally positioned to offer innovative, accessible, affordable, educational programs to meet the needs of students in in-demand fields.

2. **Explain how the proposed program supports the institution's strategic goals and provide evidence that affirms it is an institutional priority. https://planning.umbc.edu/strategic-plan/**

The *Strategic Plan for Advancing Excellence* presented four focus areas with strategic goals subsumed under each and the proposed M.A. program in Applied Behavior Analysis contributes to each of these strategic goals.

Program Proposal: M.A., Psychology—Applied Behavior Analysis, UMBC

The M.A. program in Applied Behavior Analysis will address the Student Experience focus area by creating an exceptional student experience that integrates in- and out-of-classroom learning to prepare graduates for meaningful careers. The practice of Applied Behavior Analysis requires a throughgoing understanding of the science of behavior that is uncompromisingly coupled with practical real world experiences in the application of the science. The proposed curriculum meets the rigorous standards for accreditation set forth by the Association for Behavior Analysis International and requires all students to complete six credits of practicum experience in the direct implementation of behavior analysis service delivery. Since 1999 we have had a partnership with the world renowned Department of Behavioral Psychology of the Kennedy Krieger Institute to provide our students with state of the art training in the science and practice of Applied Behavior Analysis that complements that which students learn in the classroom. To become a BCBA, in addition to meeting coursework requirements, individuals must also complete 2,000 hours of supervised fieldwork experience, which our graduates will complete in this two-year program. In addition to the Department of Behavioral Psychology of the Kennedy Krieger Institute, we have identified several additional community partners who can offer high-caliber supervised fieldwork experiences.

The M.A. program in Applied Behavior Analysis will address the Collective Impact in Scholarship focus area by elevating UMBC as a nationally and internationally recognized research university that is strongly connected to the economic vitality of the Baltimore region and state of Maryland. The Psychology Department currently offers a track in Applied Behavior Analysis within the Human Services Psychology program that is accredited by the Association for Behavior Analysis International. This makes UMBC's curriculum one of only 27 accredited master's programs in the world, which has furthered the national and international prominence of UMBC.

The M.A. program in Applied Behavior Analysis will address the Innovative Curriculum focus area by preparing graduates for meaningful and plentiful career opportunities and engaged citizenship that will enhance UMBC's position as a national leader in graduate education. The state of the art curriculum is driven by accreditation standards, which provide a framework that includes coverage of important topical areas, while also allowing for creativity in meeting the needs of our students.

The M.A. program in Applied Behavior Analysis will address the Community Connections focus area by nurturing existing partnerships and building and extending connections with diverse partners to enrich the state and surrounding region. With our more than 20-year relationship with the Kennedy Krieger Institute, we will continue to nurture our connection to ensure a mutually beneficial arrangement. In addition, we will foster innovative problem-solving through strategic partnerships with government agencies (e.g., schools) and local businesses and community-based organizations that provide Applied Behavior Analysis services. In so doing, the M.A. program in

Applied Behavior Analysis will advance UMBC's regional reputation as a vital stakeholder in Maryland's innovative economy.

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 program will be funded entirely through tuition revenue. Additional support services such as technology support, library services, marketing, and related academic/program support will be drawn from UMBC's existing institutional capabilities.

4. Provide a description of the institution's commitment to: (a) ongoing administrative, financial, and technical support of the proposed program, and (b) continuation of the program for a period of time sufficient to allow enrolled students to complete the program.

a) Behavioral health-related studies like Applied Behavior Analysis are an institutional priority under UMBC's *Strategic Plan*. As such UMBC is committed to providing the necessary administrative, financial, and technical support to launch, grow, and sustain this M.A. degree program in Applied Behavior Analysis. Technical support for students and faculty is available through Blackboard and other web-based technologies supported by UMBC's Division of Information Technology (DOIT), in-class time, and faculty office hours.

b) Launch of this new graduate degree will present no challenge or obstacles to currently enrolled (or future) students from completing their graduate studies in Applied Behavior Analysis at UMBC.

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 advancement and evolution of knowledge***. Market demand can be operationalized as the availability of openings in the job market to be served by the

new program. Market demand (different from need) is another consideration when implementing a new academic program or changing an existing program. It is important that students have a reasonable opportunity for a job upon completion of a degree. UMBC has offered a track in Applied Behavior Analysis since 1999 with nearly 200 students participating. UMBC faculty anticipated a substantial need for Applied Behavior Analysis practitioners in the state and region at a time when there were no other Applied Behavior Analysis graduate programs in Maryland. At present, Mount St. Mary's University and Johns Hopkins University offer the only other degree granting, Verified Course Sequences in Behavior Analysis, in Maryland. The UMBC curriculum is the only one accredited by the Association for Behavior Analysis International. Notably, by 2032, the only pathway to becoming a Board Certified Behavior Analyst will be to earn a degree from an accredited university training program, and UMBC's track is accredited. Given the ongoing workforce need to develop qualified Applied Behavior Analysis practitioners across the region, UMBC's M.A. in Applied Behavior Analysis will be offered at UMBC's Main Campus.

The demand and need for graduate training in Applied Behavior Analysis is multifaceted. In 2000, the Centers for Disease Control (CDC) and Prevention determined that autism spectrum disorder occurred in about 1 in 150 children. Since 2000, estimates have risen consistently, and the most recent data from the CDC suggest that 1 in 36 children were diagnosed with autism spectrum disorder. Importantly, as a spectrum disorder, autistic individuals present with a variety of strengths and challenges necessitating a variety of treatment options. Among the treatment options to serve individuals with autism, the CDC has organized the following categories: (a) behavioral, (b) developmental, (c) educational, (d) social-relational, (e) pharmacological, and (f) psychological. The CDC *specifically* cites Applied Behavior Analysis as an exemplary behavioral approach. Applied Behavior Analysis is considered an evidence-based best practice treatment by the U.S. Surgeon General and by the American Psychological Association. "The evidence based" moniker means that Applied Behavior Analysis has passed scientific tests of its usefulness, quality, and effectiveness. The American Association on Intellectual and Developmental Disabilities, the oldest and largest interdisciplinary organization of professionals concerned with intellectual disability and related disabilities, designated Applied Behavior Analysis-based procedures for the treatment of behavioral problems with individuals with intellectual disability and related disorders as "highly recommended" (Rush & Frances, 2000). Although the proposed M.A. curriculum in Applied Behavior Analysis will place a heavy emphasis on meeting the workforce demand for persons providing services to individuals with autism, Applied Behavior Analysis has many potential applications (Heward et al., 2022[2]).

[2] Heward, W.L., et al. (2022). ABA from A to Z: Behavior science applied to 350 domains of socially significant behavior. *Perspectives on Behavior Science*, *45*, 327–359.

More than 20 studies have established that intensive and long-term therapy using Applied Behavior Analysis principles improves outcomes for many but not all children with autism. "Intensive" and "long term" refer to programs that provide 25 to 40 hours a week of therapy for 1 to 3 years. These studies show gains in intellectual functioning, language development, daily living skills and social functioning. Evidence-based practice is a model of professional decision-making in which practitioners integrate the best available evidence with client values/context and clinical expertise to provide services for their clients. Given the increase in diagnoses of ASD, and because Applied Behavior Analysis has been identified as an evidenced based practice, there is a pressing need for the advancement and evolution of knowledge to better serve individuals with ASD and their families.

(b) ***Societal needs, including expanding educational opportunities and choices for minority and educationally disadvantaged students at institutions of higher education.*** As a discipline, the Applied Behavior Analysis practice community is considerably lacking in diversity. Demographic data reported by the Behavior Analyst Certification Board show that approximately 70% of individuals who hold the credential of Board Certified Behavior Analyst are White. The remainder of the workforce[3] is made up of individuals who identify as: Hispanic and Latinx (11%), Asian (7%), Black (4%), Native Hawaiian/Pacific Islander (0.37%), and American Indian/Alaska Native (0.28%). In addition, United States Census data predict that by 2028 the foreign born share of the population will reach a historic high since the year 1850. As such, the need to proactively prepare for more diverse client populations is critical. More specifically, applied behavior analysts work with diverse populations and there is a growing need for behavior analysts to provide culturally responsive services (Jimenez-Gomez & Beaulieu, 2022). As of 2020, Maryland is the fourth most diverse state in the nation according to the United States Census Bureau's Diversity Index. Given the rich ethnic, racial, and cultural diversity in Maryland, and of the university, we believe that we are in a unique position to help to diversify the Applied Behavior Analysis workforce.

Practitioner-oriented programs like this proposed M.A. in Applied Behavior Analysis specifically are designed to foster the advancement and evolution of knowledge and address critical societal needs. With the program's already proven reputation and current, flexible, and agile curriculum, given the continued (if not increased) workforce demand for Board Certified Behavior Analysts as identified by the workforce demand analysis, UMBC expects to develop innovative educational programs and opportunities, such as this new M.A. in Applied Behavior Analysis to provide the flexible ability for prospective students to upgrade their professional skills to meet job market requirements.

[3] 7.5% of respondents did not provide an answer to this question.

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

UMBC is not a historically black institution and this item is not applicable to the current proposal.

2 and 3. Provide evidence that the perceived need is consistent with the Reference relevant information from the USM Strategic Plan and the 2022 Maryland State Plan for Higher Education.

The USM Strategic Plan outlined several priorities that will steer the System's work before 2030. First, the Strategic Plan has established "Academic Excellence and Innovation" as a priority, evinced by goals to: (a) attract and graduate more Maryland students, (b) recruit and retain exceptional faculty, and (c) pilot learning pathways for working professionals to meet workforce demands. To better prepare Maryland students for the competitive application to the M.A. program in Applied Behavior Analysis we have developed and will expand on a series of undergraduate course offerings. The most competitive graduate training programs in Applied Behavior Analysis attract applicants who bring considerable practical and research experience to bear on their application. At UMBC we will aim to ensure that our undergraduates have access to experiences (research and practice opportunities) and coursework that raise our undergraduates to the top of any applicant pool. To successfully recruit and retain exceptional faculty the UMBC Psychology department has instituted policies and procedures to support and mentor new faculty. New hires to the Applied Behavior Analysis faculty will be invited to identify a senior faculty member in the department to serve as a mentor, and experience bi-weekly meetings for the first year, and monthly meetings for the second and third year. At the college level, the College of Arts Humanities and Social Sciences has developed initiatives, policies and procedures that will enhance UMBC's success at recruiting and retaining under-represented minority faculty. Among these initiatives is the Eminent Scholar Program, which facilitates a mentoring relationship between a newly-hired UMBC tenure-track Assistant professor and a prominent researcher/practitioner in their field. This relationship will be established to provide a connection for the UMBC faculty member to their larger research and/or creative, artistic community to enhance their success as they advance through the ranks of academia. Finally, the proposed M.A. in Applied Behavior Analysis will be explicitly tailored to meet the needs of working professionals so that we can begin to address the exceedingly high demand for Board Certified Behavior Analysts in Maryland specifically, and in the country, more generally. All courses will be offered in the evening (after the typical workday) to accommodate students who work full time (we anticipated that this will be 100% of students). In addition, students will be matched to approved practicum sites for full-time employment opportunities.

A second priority outlined in the USM Strategic Plan and echoed in the 2022 Maryland State Plan for Higher Education relates to "Access, Affordability, and Achievement." This priority includes goals to: (a) strengthen the connection between learning experiences and the knowledge, skills, and abilities needed to succeed, (b) develop innovative education programs resulting in new credentials, and (c) design financial and business models that meet changing student needs. With respect to strengthening the connection between learning experiences and the knowledge, skills, and abilities needed to succeed, the proposed curriculum includes in person coursework, and a practicum during which students have real world experiential learning opportunities to improve the practice of behavior analytic human service provision. Such real-world experiences can provide several benefits to students and their potential for success when entering the workforce. First, they provide low-risk/high-reward learning opportunities to discover what a potential career may include. Second, they provide hands-on experiences for students to apply what they have learned in the classroom. And third, they allow students the opportunity to establish professional networks for jobs post-graduation. At some point in any career, an expert will need to teach and train the next generation of experts; it is important that people learn how to teach well, regardless of their interest in a formal academic or teaching career. To this end, the proposed curriculum includes coursework on supervision, management, mentorship, and training, and the practicum component of the curriculum permits for guided exposure to the supervision, management, and training in a low-risk/high-reward context. With respect to innovative programs that create new credentials, the proposed program in Applied Behavior Analysis will contribute to this aim by adding one new credential and the potential to obtain one new license. Upon completion of the coursework and the 2,000 hours of supervised fieldwork experience, graduates of the proposed M.A. program in Applied Behavior Analysis will qualify to sit for the exam to become a Board Certified Behavior Analyst (the credential this is required to practice Applied Behavior Analysis). Once a Board Certified Behavior Analyst, graduates may then apply for licensure as a behavior analyst in the state of Maryland. Since 2009, the applied behavior analysis profession has rapidly become regulated. There are currently 37 states, including Maryland, that have passed legislation to license or otherwise regulate behavior analysts.[4] Finally, in the spirit of affordable access, the Kennedy Krieger Institute offers full time employment (salary and benefits) and tuition remission for education for eligible Applied Behavior Analysis students. We will continue this relationship with the Kennedy Krieger Institute. In addition, we have developed new partnerships with community providers who serve children with autism that offer similar tuition remission packages.

A third priority of the USM Strategic Plan involves strengthening the workforce and economic development in Maryland. Goals ascribed to this priority include producing

[4] https://www.bacb.com/u-s-licensure-of-behavior-analysts/

graduates to enter the workforce and developing programs to add skills to the state's workforce. As noted previously, the demand for Board Certified Behavior Analysts has increased by 23% from 2021 to 2022, nationally, and demand consistently exceeds supply in the DMV. Thus, the proposed M.A. program in Applied Behavior Analysis will play an essential role in meeting this demand. Further, it is common for those with an undergraduate degree to join the workforce upon graduation, and then return to obtain a graduate degree. For example, one may graduate with a bachelor's degree, earn the credential of Board Certified Assistant Behavior Analyst, and then work for 1-2 years to gain experience. At which point, one may "upskill" by returning for an advanced (graduate) degree. As such, the proposed program in Applied Behavior Analysis will play a role in addressing the goal of reskilling and upskilling the state's workforce.

Finally, diversity, equity, and inclusion have been prioritized in the USM Strategic Plan. We share the sentiment that matters related to diversity, equity, and inclusion represent both a discrete policy and a foundational value that will guide the proposed M.A. program in Applied Behavior Analysis. As a field, Applied Behavior Analysis is lacking in diversity. The most recent data from the Behavior Analyst Certification Board show that nearly 70% of all individuals who hold the Board Certified Behavior Analyst credential or Board Certified Behavior Analyst-Doctoral designation, are White. Hispanic and Latinx Board Certified Behavior Analysts make up 11% of the population, whereas Asian (7%) and Black (4%) individuals account for the remainder. As a Minority Serving Institution, the proposed M.A. in Applied Behavior Analysis is ideally suited to take an active role in diversifying the UMBC student body, and by extension, the discipline of Applied Behavior Analysis.

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. Present data and analysis projecting market demand and the availability of openings in a job market to be served by the new program. Provide and cite data from the Bureau of Labor or O*NET Online for the following, with greatest emphasis on data from the State of Maryland.

Graduates will find employment opportunities in the human services industry. Upon graduating from the proposed M.A. in Applied Behavior Analysis, those who pass the examination to become a Board Certified Behavior Analyst will enter the human services workforce with the highest credential available to behavior analysts (Board

Certified Behavior Analyst). The target market for this proposed M.A. in Applied Behavior Analysis consists of individuals who have recently completed a bachelor's degree in psychology or related disciplines, and individuals who are currently employed in the human services sector who aspire to expand their employment opportunities by pursuing an advanced degree. Desired candidates for admissions are college graduates with current Applied Behavior Analysis research and practice experience and/or a solid academic background in Applied Behavior Analysis, or from a field related to working in Applied Behavior Analysis (e.g., education). Students may also be early-career and recent graduates looking to expand their knowledge as they enter the Maryland workforce.

2. 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.

According to data gathered from Lightcast, a labor market analytics tool, demand for behavior analysts is increasing: Annual nationwide demand for individuals holding the BCBA certification has increased each year since 2010, with a 23% increase from 2021 to 2022 (Behavior Analyst Certification Board, 2023). To put a quantitative point on the demand, there were 57,569 job postings in 2022 that either required or preferred the BCBA certification or BCBA-D[5] designation. One causal variable that accounts for this increased demand in the autism insurance mandate, which requires certain insurers to provide coverage for autism spectrum disorder. In 2021, there were 1,110 job postings, in Maryland, alone, for individuals holding the BCBA credential. In 2022, there were 1,211 job postings for individuals holding the BCBA credential. When considering the greater DMV region there have been 6,149 jobs posted for BCBAs in 2021 and 2022. Accordingly, as a public research university, UMBC is ideally positioned to offer innovative, accessible, affordable, educational programs to meet the needs of students in in-demand fields.

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

Since 1999 we have offered a track in Applied Behavior Analysis to more than 200 students. Between 2007 and 2020 between 60 and 80 students per year expressed interest in the track, and we taught between 8 and 10 students per annual cohort. We have been methodical in ensuring that our students receive a top-notch classroom education. In addition, the profession of Applied Behavior Analysis requires hands-

[5] The "D" refers to "Doctoral." The credential held by those with a master's degree or Ph.D. in the same—Board Certified Behavior Analysts. However, those with a doctorate may be eligible to apply for the *designation* of BCBA-D.

on, real-world practice experience. To that end we have carefully curated a small number of approved practicum sites that can provide world class supervision in the practice of Applied Behavior Analysis. Our first approved practicum placements were at the Kennedy Krieger Institute. We have since expanded our network of approved practicum placements, which will permit us to accommodate a larger cohort of students, to keep pace with the number of applications received and overall market demand.

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.**

We identified and compared similar programs in the region. Only 1 program is similar in title in the state of Maryland; however, after thorough review of degree type, content, and credit load, we concluded that no direct program duplication exists. UMBC believes that this degree is aligned with and fully supports the 2022 MHEC *Statewide Plan* and USM's *Strategic Plan*, even if the program overlap others to varying degrees. Ultimately, our goal is to actively support the goals of MHEC, the USM, and UMBC by providing maximum flexibility, affordability, and accessibility to students to upgrade their occupational, vocational, technical, and/or professional skills to meet critical workforce and job market requirements. A comparison of regional programs with UMBC's proposed M.A. in Applied Behavior Analysis is found in Appendix 1.

2. **Provide justification for the proposed program.**

UMBC is classified as a doctoral university with very high research activity by the Carnegie Classification of Institutions of Higher Education. Building upon that foundation, this proposed M.A. degree in Applied Behavior Analysis gives students the formal, conceptual, and technological skills necessary for professional practice to fill management, practice, and/or leadership roles along with the opportunity to engage in applied research and practice, if desired.

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.**

The M.A. in Applied Behavior Analysis does not duplicate existing graduate programs at HBIs in the Baltimore or Washington region. There is no duplication of any program at Morgan State University, Bowie State University, Coppin State, or the University of Maryland Eastern Shore. The University of Maryland Eastern Shore offers a single graduate course in Applied Behavior Analysis. Bowie State offers a single undergraduate course in Applied Behavior Analysis.

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.

This program does not duplicate existing programs at HBIs, and it is expected to have no impact on the identity or mission of any of the HBIs, as described above.

G. Adequacy of Curriculum Design, Program Modality, and Related Learning Outcomes

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

This practitioner-oriented curriculum was developed by faculty within the UMBC Department of Psychology drawing upon their expertise in the areas of intellectual and developmental disabilities, difficulties in expressive and receptive language for persons with disabilities, the emission of severe challenging behavior (e.g., self-injurious behavior) exhibited by persons with disabilities, and organizational behavior management. The curriculum has been verified as meeting the requirements to qualify for the national certification examination, and the program is accredited by the Association for Behavior Analysis International, which is our flagship professional organization. The proposed program has been assessed by external referees and been deemed to meet high standards.

The M.A. in Applied Behavior Analysis will be overseen by a full-time Graduate Program Director (GPD) and member of the Psychology faculty with a strong record of teaching and scholarship in Applied Behavior Analysis. The GPD, is supported as needed by the Chair in matters related to faculty/program oversight, mentoring, and related matters. The Applied Behavior Analysis Program Director is a member of the Psychology Graduate Committee and works with that committee on areas of mutual interest and oversight, to include recruiting, cross-program collaboration, new course ideas, and program innovations.

2. Describe educational objectives and learning outcomes appropriate to the

rigor, breadth, and (modality) of the program.

The proposed curriculum will be taught in-person. As a program designed to prepare working practitioners, there is an important and symbiotic interplay between that which is learned in the classroom, and that which is applied, in practice. In keeping with the requirements of accreditation, graduates of the M.A. in Applied Behavior Analysis will be expected to:

a. Successfully demonstrate knowledge of philosophical underpinnings of the science of behavior, concepts and principles related to learning, and methods of measuring behavior in the context of appropriate experimental designs. (SLO-1)

b. Successfully demonstrate knowledge of the Ethics Code for Behavior Analysts, methods of behavioral assessment and behavior change procedures, and strategies for the effective personnel supervision and management. (SLO-2)

c. Demonstrate the ability to implement behavior analytic assessment and intervention procedures. SLO-3.

d. Demonstrate the ability to conduct scholarly and/or professional-level research by completing a capstone project. (SLO-4)

e. Pass the credentialing examination to become a Board Certified Behavior Analyst. (SLO-5)

3. **Explain how the institution will:**

(a) Provide for assessment of student achievement of learning outcomes in the program

Learning outcomes to assess the success of the program in meeting these objectives are included in Appendix 2. The UMBC Graduate School, College of Arts Humanities and Social Sciences, and Department of Psychology track enrollments, retention, time-to-degree, and graduation rates for all programs. Appendix 3 describes the mechanisms used by the program to assess and document student learning competencies/outcomes (SLOs) in support of program objectives.

(b) Document student achievement of learning outcomes in the program

Student achievement will be documented as outlined in the assessment process, and with the corresponding rubric and rating forms.

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

The current M.A. track in Applied Behavior Analysis consists of 36 credits and has been designed to align with the requirements for accreditation. The curriculum for the proposed M.A. degree consists of eight traditional courses totaling 24 credit hours, two three-credit practicum courses totaling 6 credit hours and two three-credit capstone courses during which students will complete a capstone project.

Core courses are aligned with reasonable needs and expectations of applied behavior analysis practitioners. Degree requirements for the M.A. in Applied Behavior Analysis are summarized in Appendix 4. Course descriptions for courses owned by the Psychology Department are shown in Appendix 5.

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

N/A

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

The M.A. in Applied Behavior Analysis is currently accredited by the Association for Behavior Analysis International and offers a course sequence that has been verified by the same organization. Upon graduation, students will have completed the necessary coursework to sit for the Board Certified Behavior Analyst credentialing examination. Students will also be required to complete the requisite number of supervised fieldwork hours to sit for the credentialing examination.

By obtaining the credential of Board Certified Behavior Analyst, certificants will automatically become eligible to apply for licensure as a Licensed Behavior Analyst, in the state of Maryland. Licensure requirements, including those for Maryland, can be found here.

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

The Applied Behavior Analysis program has held a longstanding partnership with the Department of Behavioral Psychology at the Kennedy Krieger Institute. The Kennedy Krieger Institute serves as a practicum placement that has hosted most of our students. A master Training Affiliation Agreement is in place between the Kennedy Krieger Institute and UMBC and is included as Appendix 8.

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.

Student Support

As per accreditation requirements, the Applied Behavior Analysis program demonstrates its commitment to public disclosure by providing written materials and other communications that appropriately represent the program to relevant parties. The program makes public its goals, objectives, and training model; its requirements for admission and graduation; curriculum; its faculty, students, facilities, and other resources; its administrative policies and procedures; the kinds of research and practicum experiences it provides; its education and training outcomes; and if the program trains professional behavior analysts. Program information can be found here.

The Applied Behavior Analysis Graduate Program Director is responsible for the majority of student advising. Other faculty involved with courses and specialization may also advise students. All program faculty will be eligible to serve on capstone project committees. Students in this program will have access to UMBC's wide range of support resources such as the Division of Information Technology, Career Services, Off-Campus Student Services, Office of Equity and Inclusion, and the Graduate Student Association, among many others. UMBC students and faculty use Blackboard as the official campus Learning Management System for course work and administration to support lecture, hybrid, and online learning modalities.

Students will be expected to have ready access to computers and the internet. Outside of lecture or in-person meetings, students and faculty will be expected to communicate through email, Blackboard, and UMBC's other collaborative platforms such as MyUMBC or Google Documents. Official information about curriculum updates, new courses, graduation deadlines, etc. is conveyed to students via the student email list as the program's official distribution medium and/or directly to the students who are on email lists maintained by UMBC's Graduate School (for graduations and academic affairs), Registrar (for scheduling), Student Business Services (for costs and financial aid), or other campus entities. Technical support for UMBC's platforms, such as email and Blackboard, is provided by UMBC's Division of Information Technology upon request to the Help Desk Request Tracker. Information of interest to students, ranging from program and course information, academic expectations, tuition and fees, graduation requirements, and more, are located on UMBC's various public websites.

As of 2023, the only financial aid opportunities for this self-supported program are offered by the U.S. government. Full time students who are employed by approved practicum placements may be eligible for tuition remission.

UMBC's Office of Accessibility & Disability Services (ADS) under the Division of Academic Affairs ensures that students with disabilities are afforded an equal opportunity to participate in and benefit from the programs, services, and activities of the University through the provision of accommodations and reasonable modifications that result in

equal access and full inclusion, which reflects UMBC's commitment to fostering an accessible and inclusive environment for all members of the UMBC community. Assistance from the ADS team is available to all UMBC students regardless of learning modality or campus location.

UMBC's Office of Equity and Inclusion has primary responsibility for managing UMBC's efforts related to Title IX as well as other civil rights matters, including discrimination, harassment, hate and bias. All faculty are considered 'responsible parties' regarding reporting requirements pursuant to UMBC's Title IX policies.

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.**

As per accreditation requirements, the Applied Behavior Analysis program demonstrates its commitment to public disclosure by providing written materials and other communications that appropriately represent it to relevant parties. This includes the following: (a) program mission, goals, objectives, and training model, (b) requirements for admission and graduation, (c) the curriculum, (d) student resources, (e) administrative policies and procedures, (f) descriptions of the research and practicum experiences, (g) education and training outcomes, and (h) description of alignment with certification and licensure standards.

H. Adequacy of Articulation

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

N/A

I. Adequacy of Faculty Resources

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

Three full-time, tenured, or tenure-track UMBC faculty members who hold terminal degrees in their respective fields will support this program. The faculty members have published frequently in top-tier journals, hold, or have held prestigious editorial appointments, have procured external funding to support their research, and have received awards in recognition of their scholarship and service contributions. Specific

course assignments have not yet been made and change on a regular basis. Appendix 9 lists faculty supporting the M.A. in Applied Behavior Analysis. In addition, the program will rely on the support of adjunct faculty. At least 50% of credits in the program will be taught by full-time faculty.

Faculty teaching in this program have access to instructional development opportunities available via the UMBC Center for Applied Learning and Teaching (CALT) and other on-campus professional development activities. For any online elements of coursework, faculty can work with UMBC's own instructional design team to incorporate best (and accessible) practices when teaching in the online environment. UMBC's DOIT offers on-demand and in-person assistance to faculty on the use of Blackboard's many features to help ensure the platform helps foster a quality learning experience for students and faculty alike regardless of in-person, hybrid, or online modalities. Program and department faculty also are encouraged to share best pedagogical practices with colleagues in this program and the broader Psychology department. Several internal grant opportunities exist to support innovation in faculty pedagogy as well.

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

    b) The learning management system

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

Faculty teaching in this program have access to instructional development opportunities available via the UMBC Center for Applied Learning and Teaching (CALT) and other on-campus professional development activities. For any online elements of coursework, faculty can work with UMBC's own instructional design team to incorporate best (and accessible) practices when teaching in the online environment. UMBC's DOIT offers on-demand and in-person assistance to faculty on the use of Blackboard's many features to help ensure the platform helps foster a quality learning experience for students and faculty alike regardless of in-person, hybrid, or online modalities. Program and department faculty also are encouraged to share best pedagogical practices with colleagues in this program and the broader Psychology department. Several internal grant opportunities exist to support innovation in faculty pedagogy as well.

J. Adequacy of Library Resources

1. **Describe the library resources available and/or the measures to be taken to ensure resources are adequate to support the proposed program. If the program is to be implemented within existing institutional resources, include a supportive statement by the President for library resources to meet the program's needs.**

On behalf of UMBC's President and Librarian, the Reference Librarian (Joanna Gadsby) of the Albin O. Kuhn Library has assessed library resources required for this program. The assessment concluded that UMBC's library can meet, with its current expansive in-person and online resources, the curricular and research needs of the M.A. in Applied Behavior Analysis program faculty and students. To facilitate greater accessibility and affordability for students, wherever possible and practicable, we will use open-access materials and publicly-available resources for instructional and enrichment activities.

2. No additional library resources are required.

K. Adequacy of Physical Facilities, Infrastructure, and Instructional Equipment

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. If the program is to be implemented within existing institutional resources, include a supportive statement by the President for adequate equipment and facilities to meet the program's needs.**

UMBC has access to excellent resources and facilities for this program at its campus locations. There are sufficient classrooms and conference rooms at the Catonsville campus to accommodate students, all equipped with technology and software to support instruction, collaboration, and communication. UMBC's internet, software, and computing capabilities are more than adequate to meet program needs.

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**

All faculty and students are assigned a UMBC institutional email address. Email is the primary form of outreach on campus and in the program.

All faculty and students have access to the University's learning management system (Blackboard Ultra) for classroom and research purposes, in addition to other online collaborative tools supported by UMBC's DOIT such as Microsoft Office/360, Google Suite, and Webex. Should it be necessary, UMBC is well-equipped to handle pivots to

remote learning, such as due to pandemics or weather emergencies. To ensure access to instructional, research, and collaboration tools, the minimum computing requirements and technical competency expectations for students will be posted on the program's website.

L. Adequacy of Financial Resources with Documentation

The M.A. in Applied Behavior will be self-supported through tuition revenue. As it is anticipated that enrollments will generate sufficient revenue to more than cover expenses, there is no significant financial impact with this proposal. As with all self-supporting graduate programs at UMBC, enrollment growth will be regularly monitored and additional, full-time faculty will be hired and/or existing part-time faculty invited to become full-time faculty to facilitate instruction and program activities across two campus locations. See Appendix 10 and 11 for program budget information.

M. Adequacy of Provisions for Evaluation of Program

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

Applied Behavior Analysis program faculty periodically review syllabi, rubrics, readings, labs, and projects to ensure a standard student experience and that materials used and presented remain relevant to and/or aligned with current accreditation standards, best practices in the discipline, program objectives, and the institutional priorities called for in the *UMBC Strategic Plan*. The Psychology department, and UMBC generally, evaluates full-time faculty through the university's established promotion and tenure process in the traditional areas of teaching, research, and service. This process includes a review of their syllabi, labs, samples of student products, classroom observation, and student surveys. Adjunct faculty are evaluated by full-time faculty members regularly to ensure quality of instruction, materials, and the student's course experience.

All UMBC faculty are evaluated via the administration of student surveys issued at the end of each semester. The data from this survey are shared with the instructor and publicly available via IRADS, whereas any qualitative comments received are shared only with the instructor. Additionally, faculty are encouraged to work with their colleagues and the UMBC Center for Applied Teaching and Learning (CALT), or Division of Information Technology (DOIT) for additional opportunities to conduct objective course assessment and/or enhancement. The Graduate Program Director likewise solicits, investigates, and attempts to resolve any student concerns regarding course or instructor quality and/or effectiveness.

The Psychology Department regularly completes its student learning outcomes assessment (SLOA). The most recent SLOA was completed in spring 2021 for the year 2020. This SLOA approach provides a review of the shared, macro-level goals of all our courses in the department, while also allowing unique, program- and level-based evaluation of the appropriate content and application. The proposed M.A. in Applied Behavior Analysis would be subject to the department evaluation of SLOA.

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.

Program evaluation is carried out through assessment of learning outcomes. The primary outcomes for the M.A. in Applied Behavior Analysis and methods of outcome assessment are identified in Appendix 2. Along with the program and department, the College of Arts Humanities and Social Sciences Dean's Office regularly reviews student enrollment, retention, culture, and financial data from a strategic perspective to ensure program outcomes are aligned with the Colleges goals and UMBC's *Strategic Plan*. UMBC's Provost Office also engages in strategic and financial reviews of all UMBC programs.

The University System of Maryland's accountability obligation includes a requirement that each academic program be reviewed every seven years. Accordingly, UMBC conducts academic program reviews (APR) to gauge program effectiveness. As recognized by USM and the Council of Graduate Schools, the APR process has five general purposes: quality assurance, quality improvement, accountability, identification of strategies for improvement, and providing the institution with information for prioritization of resources. The Psychology graduate programs successfully completed their latest APR in 2018-2019 academic year.

Taken together, UMBC has a robust, multi-stakeholder method to assess academic program effectiveness, learning outcomes, student retention, student/faculty satisfaction, and cost-effectiveness. These methods are supported by continual internal UMBC evaluation of industry trends and needs to ensure programs continue to meet current and future industry and workforce requirements.

N. Consistency with the State's Minority Student Achievement Goals

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

UMBC was designated a Minority Serving Institution in 2017 and is first in the nation for producing the most African American graduates who have gone on to earn MD-Ph.D.

degrees, according to the Association of American Medical Colleges (AAMC). As of fall 2022, 61% of UMBC's undergraduates are minorities, which mirrors Maryland's 2020 census count of 53% non-White (UMBC Spring 2023 Cultural Diversity Report). We have added undergraduate course offerings to better prepare our diverse UMBC undergraduate study body to be competitive applicants for our M.A. track in Applied Behavior Analysis, and to play a part in diversifying the field of Applied Behavior Analysis.

Data from the Behavior Analyst Certification Board show that the racial and ethnic makeup of individuals who hold the Board Certified Behavior Analyst credential or Board Certified Behavior Analyst-Doctoral designation are as follows:

White	Asian	Hispanic/Latinx	Black	Male	Female	Non-binary or Other
69.16%	7.39%	11.04%	4.21%	11.93%	86.73%	0.23%

As of Fall 2023, the makeup of students completing Applied Behavior Analysis coursework at UMBC is as follows:

White	Asian	Hispanic/Latinx	Black	Male	Female	Non-binary or Other
41.21%	35.3%	17.6%	5.9%	17.6%	82.4%	0%

The above data show that UMBC is taking an active role in diversifying the field of Applied Behavior Analysis.

Among other active efforts to foster greater diversity in our campus community of scholars, UMBC joined the University Innovation Alliance (UIA) in June 2021. The UIA is the leading national coalition of public research universities committed to increasing the number and diversity of college graduates in the U.S., with a specific focus on low

income, first-generation, and students of color. In the next phase of its work, the UIA will focus on eliminating disparities in educational outcomes based on race and ethnicity, in addition to disparities by income, first-generation college student status, gender, and geography.

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

The proposed M.A. in Applied Behavior Analysis will not provide distance education.

Program Proposal: M.A., Psychology—Applied Behavior Analysis, UMBC

Appendix 1: Similar Programs in the State or Region

Johns Hopkins University (JHU) offers a post master's certificate and a Master's of Science in Special Education with an emphasis in Applied Behavior Analysis.

The 21-credit Post-master's Certificate in Applied Behavior Analysis is designed for special educators, administrators, and school psychologists who already have a master's degree. UMBC's *proposal is for a degree granting curriculum, not a certificate program.*

The target market of the master's degree offered from JHU is special educators, administrators, and school psychologists, and the focus is special education. Though the proposed M.A. in Applied Behavior Analysis will teach its graduates to work in the education arena, the skills taught are applicable in a diverse set of environments (e.g., clinics, in home therapy, hospital settings). By contrast the primary focus of the proposed M.A. at UMBC is in Applied Behavior Analysis. The JHU curriculum consists of 36 credit hours distributed between Applied Behavior Analysis and Special Education and can be completed on a part time basis. The proposed UMBC curriculum will involve exclusive content in ABA and will involve full-time enrollment. Students at JHU have the option of enrolling in an additional 12 credits of practicum credits that would be completed in the third year (bringing the program total to 48 credits). Students in the proposed UMBC curriculum will complete 6 credits hours of practicum as part of their 36 credit course of study, complete the curriculum in two years, and meet the supervised fieldwork experience requirements to sit for the Board Certified Behavior Analyst examination, upon graduation. A portion of the JHU curriculum can be completed online. The entirety of the proposed UMBC curriculum will be completed in person.

Mount St. Mary's University (MSM) offers a Master's of Science in Applied Behavior Analysis.

Mount St. Mary's, a private university located in a different region of the state, offers an M.S. in Applied Behavior Analysis. The program consists of 42 credit hours and can be completed on a part-time basis, with a portion of the curriculum available online. In contrast, the proposed program at UMBC requires 36 credit hours and is designed to be completed in person on our Catonsville campus.

Program Proposal: M.A., Psychology—Applied Behavior Analysis, UMBC

Appendix 2: Learning Outcomes and Assessments, M.A. in Applied Behavior Analysis

SLO-1. Successfully demonstrate knowledge of philosophical underpinnings of the science of behavior, concepts and principles related to learning, and methods of measuring behavior in the context of appropriate experimental designs.

MEASURE: Students will be required to successfully pass all courses on philosophical underpinnings of the science of behavior, concepts and principles related to learning, and methods of measuring behavior in the context of appropriate experimental designs in the degree program. They will be assessed on their understanding of these items with the goal of developing a robust and interdisciplinary knowledge of Applied Behavior Analysis. As appropriate, each course will assess students based on exams, individual or group projects, presentations, papers, and/or case studies.

CRITERION: Successful completion of each course with a B or better grade. The individual faculty member and/or the Applied Behavior Analysis Graduate Program Director will meet with students not meeting this criterion to help improve their performance or determine their continued enrollment in the program. The Applied Behavior Analysis Graduate Program Director will review syllabi annually to ensure relevancy, currency, and pedagogical appropriateness, and importantly, to ensure that courses remain in compliance with accreditation standards.

ASSESSMENT: Each semester starting in Fall 2025 or upon program launch.

SLO-2. Successfully demonstrate knowledge of the Ethics Code for Behavior Analysts, methods of behavioral assessment and behavior change procedures, and strategies for the effective personnel supervision and management.

MEASURE: Students will be required to successfully pass all courses on Ethics Code for Behavior Analysts, methods of behavioral assessment and behavior change procedures, and strategies for the effective personnel supervision and management in the degree program. They will be assessed on their understanding of these items with the goal of developing a robust and interdisciplinary knowledge of Applied Behavior Analysis. As appropriate, each course will assess students based on exams, individual or group projects, presentations, papers, and/or case studies.

CRITERION: Successful completion of each course with a B or better grade. The individual faculty member and/or the Applied Behavior Analysis Graduate Program Director will meet with students not meeting this criterion to help improve their performance or determine their continued enrollment in the program. The Applied Behavior Analysis Graduate Program Director will review syllabi annually to ensure relevancy, currency, and pedagogical appropriateness, and importantly, to ensure that courses remain in compliance with accreditation standards.

ASSESSMENT: Each semester starting in Fall 2025 or upon program launch.

SLO-3. Demonstrate the ability to implement behavior analytic assessment and intervention procedures.

MEASURE: Students will be assessed by UMBC faculty on their ability to implement behavior analytic assessment and intervention procedures and by on-site practicum supervisors who hold the credential of Board Certified Behavior Analyst who supervise the student's fieldwork experience. Performance will be measured with a checklist based on that recommended by the Behavior Analyst Certification Board. The form appears as Appendix 6.

CRITERION: Ratings of "Satisfactory" will result in the criterion grade of "Pass." The Graduate Program Director will receive the completed practicum evaluation form two times in the fall semester and two times in the spring semester and discuss each student's performance with their practicum supervisor.

ASSESSMENT: Twice in fall and twice in spring starting in Fall 2025 or upon program launch.

SLO-4. Demonstrate the ability to conduct scholarly and/or professional-level research by completing a capstone project.

MEASURE: Students will be assessed on their ability to develop and present scholarly or professional grade written and oral deliverables by way of their capstone project. To meet these goals, they will be expected to demonstrate effective organizational, time management, communication, critical thinking, and other such skills that contribute to an effective applied behavior analysis practitioner in the workplace. As appropriate, each course will assess students based on exams, individual or group projects, presentations, papers, literature reviews, and/or case studies. The capstone manuscript rubric and oral presentation rubric appear as Appendix 7.

CRITERION: Ratings of "Acceptable" or better, will result in the criterion grade of "Pass." The Graduate Program Director will receive the completed rubrics from the Capstone Committee Chairperson who will summarize scores to produce a mean.

ASSESSMENT: Each semester starting in Fall 2025 or upon program launch.

SLO-5. Pass the credentialing examination to become a Board Certified Behavior Analyst.

MEASURE: The Behavior Analyst Certification Board provides all programs with a Verified Course Sequence with data on the number of applicants from an institution who sat for and passed the Board Certified Behavior Analyst examination. The exam consists of 150 multiple choice questions and test taker are given up to 4 hours to finish.

CRITERION: The criterion to pass the exam is determination by the Behavior Analyst Certification Board. An individual is only eligible to sit for the examination after

graduating, thus, there will be no contingencies in place for our students. However, the pass rate data are viewed as a quality indicator of accredited programs, and as such, pass rate data will be used as one measure of the quality of our classroom instruction and practicum experiences.

ASSESSMENT: Pass rate data are made available annually, provided that a minimum of seven individuals from one institution sit for the exam. If fewer than seven people sit for the exam in one year, pass rate data are withheld until at least seven people sit for the exam.

Program Proposal: M.A., Psychology—Applied Behavior Analysis, UMBC

Appendix 3: Student Competencies Assessment

This appendix describes the quantitative and qualitative ways that students in the M.A. Applied Behavior Analysis program will be assessed in their courses, which are aligned with the program objectives described previously.

Quantitative assessment

- Maintenance of a 'B' or better cumulative GPA.
- Quizzes, mid-term, and/or final examinations as appropriate.
- Practical examinations to evaluate competency with applied behavior analytic instruments and techniques.
- Written project analyses and/or case studies.
- Written assignments, including in-class writing assignments and research papers that require students to conduct independent analysis.
- Oral assignments that include both presentation of individual or group work and critiquing the work of others.
- Experiential learning opportunities as offered through faculty-led research opportunities and field experiences.
- The Capstone project (preparing the manuscript, running the study or experiment, defending the project at an oral defense).

Qualitative assessment

- Academic advising at the program level to ensure students maintain academic and program expectations to proactively head off potential obstacles to success.
- Individual, peer-group, and/or in-class critiques of student work.
- Direct engagement between faculty and students in classroom, practicum placements, or online platforms.
- Practicum (PSYC 693, PSYC 694) and capstone courses (PSYC 793, PSYC 794) during which students gain hands on experience in the practice of Applied Behavior Analysis (practicum courses) and conduct a structured independent research effort to develop a scholarly or professional paper demonstrating their critical thinking skills, analytical capabilities, and/or accumulated technical expertise as a practitioner of Applied Behavior Analysis.

Program Proposal: M.A., Psychology—Applied Behavior Analysis, UMBC

Appendix 4: M.A. Applied Behavior Analysis Degree Requirements

The required core curriculum of the M.A. in Applied Behavior Analysis (36 credits) is as follows:

PSYC 605 Learning and Cognition (3)

PSYC 615 Methods in Applied Behavior Analysis (3)

PSYC 693 Practicum I in Applied Behavior Analysis Interventions (3)

PSYC 616 Measurement in Applied Behavior Analysis (3)

PSYC 663 Ethics for Applied Behavior Analysts (3)

PSYC 694 Practicum II in Applied Behavior Analysis Interventions (3)

PSYC 669 Organizational Behavior Management (3)

PSYC 617 Applied Behavior Analysis in Developmental Disabilities (3)

PSYC 793 Interventions in Applied Behavior Analysis I (3)

PSYC 662 Verbal Behavior (3)

PSYC 655 Advanced Topics in Applied Behavior Analysis (3)

PSYC 794 Interventions in Applied Behavior Analysis II (3)

Program Proposal: M.A., Psychology—Applied Behavior Analysis, UMBC

Appendix 5: M.A. in Applied Behavior Analysis Course Names and Descriptions

PSYC 605: Learning and Cognition (3)

A systematic survey of research and theory about learning and cognition from a variety of perspectives. Topics include reinforcement, discrimination, respondent conditioning, attention, memory, and language. Special attention is given to the role of these processes in problems of human behavior.
Co- or Prerequisite: PSYC 615.

PSYC 615: Methods in Applied Behavior Analysis (3)

This course treats behavioral interventions for establishing, strengthening, and maintaining functional behavior (e.g., communication skills) and reducing aberrant behavior (e.g., self-injury), and it examines the experimental foundations of assessment and intervention methods, including research on multiple sources of behavior. By integrating clinical research and practice, it also prepares students for the practicum and intervention sequences in the Applied Behavior Analysis Program.
Co- or Prerequisite: PSYC 605.

PSYC 693: Practicum I in Applied Behavior Analysis Interventions (3)

This sequence provides students with basic competencies relevant to increasing functional behavior (e.g., communication skills) and decreasing maladaptive behavior (e.g., self-injury). Experience with basic behavioral interventions will include procedures such as shaping and chaining, arranging differential consequences of behavior and manipulating antecedent stimuli. Pass/fail grading only.
Co- or Prerequisite: PSYC 615.

PSYC 616: Measurement in Applied Behavior Analysis (3)

This course provides a basic understanding of systematic data collection and analysis methods used in applied behavior analysis to make informed (data-driven) clinical decisions. The course covers behavioral assessment strategies and topics, including sampling and observation methods, inter-observer agreement and behavioral inter-viewing. It also covers data-analysis methods for systematically answering clinical questions with individual clients, including functional analysis, graphical data analysis and reversal, multiple-baseline and multi-element designs.
Prerequisite: PSYC 615

PSYC 663: Ethics for Applied Behavior Analysts (3)

This course provides a comprehensive review of the Ethical Guidelines established by the Behavior Analyst Certification Board and codes of conduct for behavior analysts in the field of Applied Behavior Analysis. Behavioral intervention for children is a Human Services field. Practitioners and researchers make decisions that can significantly impact the lives of the people with whom they work, and their families. Further, individuals with

intellectual and developmental disabilities frequently receive services from other disciplines. This means that behavior analysts must operate in a manner that is professional while providing the most empirically supported ethical interventions.
Prerequisite: PSYC 605.

PSYC 694: Practicum II in Applied Behavior Analysis Interventions (3)

This sequence provides students with basic competencies relevant to increasing functional behavior (e.g., communication skills) and decreasing maladaptive behavior (e.g., self-injury). Experience with basic behavioral interventions will include procedures such as shaping and chaining, arranging differential consequences of behavior and manipulating antecedent stimuli. Pass/fail grading only.
Co- or Prerequisite: PSYC 615.

PSYC 669: Organizational Behavior Management (3)

This course provides students with a behavior-analytic conceptualization of organizational behavior and the underlying research on applied interventions in a variety of organizational settings. The course places a premium on personnel, supervision, and management.

PSYC 617: Applied Behavior Analysis in Developmental Disabilities (3)

This course will introduce students to biological, genetic, and environmental factors associated with intellectual and developmental disabilities that are commonly encountered by behavior analysts. An Understanding of the range of disabilities will be developed and the primary strengths and deficits associated with specific disabilities will be emphasized. This course will focus on both the practice and the science of working with individuals with disabilities, from a behavior analytic perspective.

PSYC 793: Interventions in Applied Behavior Analysis I (3)

This intervention sequence is designed to help students develop independent intervention skills relevant to applied behavior analysis. The student will apply behavioral principles and methods to a problem of social importance (e.g., clinical, educational, organizational) by carrying through all stages of a program with a client, from assessment and design through intervention and evaluation of outcome. After designing and implementing the intervention program, the student will describe the methods and outcomes in a presentation and also in a written format appropriate to journals that publish research or clinical investigations in behavior analysis.
Prerequisites: PSYC 616 and PSYC 693-PSYC 694.

PSYC 662: Verbal Behavior (3)

Current empirical and theoretical matters relevant to the functional analysis of verbal behavior, within an applied behavior analytic framework. Students will be introduced to

the basic verbal operants and to experimental operations designed to teach the basic verbal operants.

PSYC 655: Advanced Topics in Applied Behavior Analysis (3)

This course offers advanced coverage of special topics, including interventions concerned with communication skills in the developmentally disabled, management of self-injury and other dangerous behavior problems, feeding disorders, autism, etc. Students will demonstrate skills in literature search and integration of the literature by writing reviews and giving presentations on specific topics.
Prerequisite: PSYC 616.

PSYC 793: Interventions in Applied Behavior Analysis II (3)

This intervention sequence is designed to help students develop independent intervention skills relevant to applied behavior analysis. The student will apply behavioral principles and methods to a problem of social importance (e.g., clinical, educational, organizational) by carrying through all stages of a program with a client, from assessment and design through intervention and evaluation of outcome. After designing and implementing the intervention program, the student will describe the methods and outcomes in a presentation and also in a written format appropriate to journals that publish research or clinical investigations in behavior analysis.
Prerequisites: PSYC 616 and PSYC 693-PSYC 694.

Program Proposal: M.A., Psychology—Applied Behavior Analysis, UMBC

Appendix 6: UMBC Student Practicum/Field Experience Evaluation

Student Name:

Student year: 1 2

This document covers the following evaluation period (please circle):

Mid-Fall End-Fall Mid-Spring End-Spring

Supervisor Name:

Please check the experiences conducted during this period:

_____ Conducting assessments related to behavioral intervention

_____ Operational definitions

_____ Review of articles (please list)_____

_____ Planning of behavioral interventions (procedures and design)

_____ Overseeing behavioral intervention implementation

_____ Capstone planning (please describe below and explain in comments)

_____ Caregiver Training

_____ Attending meetings related to behavioral program

_____ Other (please describe)

_____

_____

Program Proposal: M.A., Psychology—Applied Behavior Analysis, UMBC

Evaluation of Supervisee Performance

S-satisfactoryNI-needs improvement U-unsatisfactory N/A- Not applicable

	S	NI	U	N/A
Arrives on time for supervision				
Maintains professional interactions with clients/consumers				
Maintains professional interactions with service providers				
Maintains professional interactions with co-workers				
Maintains appropriate attire and demeanor				
Initiates professional self-improvement				
Accepts supervisory feedback appropriately				
Seeks supervision appropriately				
Timely submission of written documentation				
Communicates effectively (written)				
Communicates effectively (oral)				
Demonstrates appropriate sensitivity to nonbehavioral providers				
Supervisee self-detects personal limitations				
Supervisee self-detects professional limitations				
Acquisition of target behavior-analytic skills				
Overall Evaluation				

Note: Please include additional comments for any “NI” or “U” scores.

Comments (please include an additional page if necessary):

Program Proposal: M.A., Psychology—Applied Behavior Analysis, UMBC

Appendix 7

Capstone Manuscript Rubric and Capstone Presentation Rubric

1. Literature review

Relevant and up-to-date literature cited and accurately described.

0	1	2	3	4	X
Failure	Poor	Acceptable	Good	Excellent	Not applicable

Take-home points and limitations of prior research clearly described.

0	1	2	3	4	X
Failure	Poor	Acceptable	Good	Excellent	Not applicable

Literature review logically leads to the purpose of the study.

0	1	2	3	4	X
Failure	Poor	Acceptable	Good	Excellent	Not applicable

Purpose clearly stated.

0	1	2	3	4	X
Failure	Poor	Acceptable	Good	Excellent	Not applicable

2. Method

Dependent Variable(s)

Operational definition(s) clear

0	1	2	3	4	X
Failure	Poor	Acceptable	Good	Excellent	Not applicable

Data collection method appropriate and clearly described

0	1	2	3	4	X
Failure	Poor	Acceptable	Good	Excellent	Not applicable

IOA (appropriate method, clear description, sufficient number of observations with IOA and sufficient level [20%+, IOA above 80%))

0	1	2	3	4	X
Failure	Poor	Acceptable	Good	Excellent	Not applicable

Independent Variable Manipulation

IV clearly described

0	1	2	3	4	X
Failure	Poor	Acceptable	Good	Excellent	Not applicable

IV integrity measures included; measures appropriate (all relevant components measured) and obtained during at least 20% of sessions in each condition.

0	1	2	3	4	X
Failure	Poor	Acceptable	Good	Excellent	Not applicable

Experimental Design

Appropriate and clearly described

0	1	2	3	4	X
Failure	Poor	Acceptable	Good	Excellent	Not applicable

Social Validity

If appropriate, did the study included measures to determine participant, caregiver, and/or teacher preference for intervention?

0	1	2	3	4	X
Failure	Poor	Acceptable	Good	Excellent	Not applicable

3. Results

Visual analysis results accurately described in narrative (and statistics are appropriate if presented)

0	1	2	3	4	X
Failure	Poor	Acceptable	Good	Excellent	Not applicable

Graphs are easily interpretable and in accordance with *JABA* guidelines

0	1	2	3	4	X
Failure	Poor	Acceptable	Good	Excellent	Not applicable

4. Discussion

Summary and interpretation of effects (or non-effects)

0	1	2	3	4	X
Failure	Poor	Acceptable	Good	Excellent	Not applicable

Possible behavioral mechanisms addressed; discussion points linked to prior research

0	1	2	3	4	X
Failure	Poor	Acceptable	Good	Excellent	Not applicable

Limitations

0	1	2	3	4	X
Failure	Poor	Acceptable	Good	Excellent	Not applicable

Future studies

0	1	2	3	4	X
Failure	Poor	Acceptable	Good	Excellent	Not applicable

5. APA style

0	1	2	3	4	X
Failure	Poor	Acceptable	Good	Excellent	Not applicable

1. PowerPoint Aesthetics: Was the font size in the presentation readable? Were only bullets used (no long sentences)? Were visuals used when appropriate? Were there grammatical or typographical errors?

0	1	2	3	4	X
Failure	Poor	Acceptable	Good	Excellent	Not applicable

2. Presentation: Was language professional and respectful? Were presentation elements introduced in a way that controlled the attending of audience members? Did the presentation extend past the time limit? Was the presentation pace hurried?

0	1	2	3	4	X
Failure	Poor	Acceptable	Good	Excellent	Not applicable

3. Students ability to answer questions about the topic.

0	1	2	3	4	X
Failure	Poor	Acceptable	Good	Excellent	Not applicable

4. Students ability to speak to the significance of the project.

0	1	2	3	4	X
Failure	Poor	Acceptable	Good	Excellent	Not applicable

Program Proposal: M.A., Psychology—Applied Behavior Analysis, UMBC

Appendix 8

Master Training Affiliation Agreement with the Kennedy Krieger Institute

Kennedy Krieger Institute

MASTER TRAINING AFFLIATION AGREEMENT
University of Maryland, Baltimore County

This Agreement is made this 1st of June, 2022 between **University of Maryland, Baltimore County** located at 1000 Hilltop Circle, Baltimore, Maryland 21250. and Kennedy Krieger Institute (hereinafter "KKI") located at 707 North Broadway, Baltimore, Maryland 21205.

Overview

University of Maryland, Baltimore County and the Kennedy Krieger Institute (KKI) are committed to the development of undergraduate and graduate students who are prepared to advance the prevention and treatment of physical and mental health disorders and promote overall public health. The purpose of the program is to provide a training studentship that is consistent with the goals of each institution.

KKI is an internationally recognized facility dedicated to improving the lives of children, adolescents and **University of Maryland, Baltimore County** is committed to outstanding quality education of future academicians who display a commitment to (1) the development of knowledge and leadership skills, (2) the practice of the highest ethical principles and professional behaviors, and (3) the promotion of diversity in leadership roles.

Both institutions are committed to the development and support of partnerships with the community to foster collaborative outreach and education programs. No student shall be discriminated against on the basis of race, religion, color, national origin, sex, marital status, sexual orientation, age, creed, gender, pregnancy, ancestry, gender identity or expression, physical or mental disability or handicap, or veteran status.

Purpose

This studentship will provide an opportunity for undergraduate and graduate students to participate in a collaborative university research and clinical educational program emphasizing the integration of clinical practice, leadership, and applied research.

Description of the Studentship

The studentship will consist of a variety of tasks which may include:

- participating in mentored clinical, research, community engagement and advocacy training opportunities
- receiving regular mentorship by professionals and/or faculty at KKI, Johns Hopkins University and University of Maryland, Baltimore County
- participating in KKI interdisciplinary training activities as appropriate
- developing and conducting clinical, leadership, and research activities with KKI professionals, Johns Hopkins University, and University of Maryland, Baltimore County faculty
- participating in community public health activities
- participating in learning seminars
- presenting the student's research findings in poster or plenary format

Students must agree to:

- abide by KKI rules and regulations
- maintain full-time enrollment in University of Maryland, Baltimore County
- maintain personal health insurance coverage, and
- maintain a GPA of 2.5 or higher (depending on the program)

Program Proposal: M.A., Psychology—Applied Behavior Analysis, UMBC

Appendix 9

Full-time Faculty Supporting the M.A. in Applied Behavior Analysis

The Psychology faculty listed below supporting the M.A. in Applied Behavior Analysis are full-time regular faculty with expertise in Applied Behavior Analysis and adjuncts who have a history of teaching, supervising, and mentoring our students. Specific course/teaching assignments have not yet been made and change on a regular basis. Additional faculty, including full-time, part-time, and/or adjuncts may be included in the future to support instructional needs as needed.

Instructor	Highest Degree Earned, Field, Institution	Rank	Courses Taught
John C. Borrero	Ph.D., BCBA-D, Experimental Analysis of Behavior, University of Florida	Professor Full time	PSYC 617 PSYC 655 PSYC 693 PSYC 694 PSYC 793 PSYC 794
Mirela Cengher	Ph.D., BCBA-D, Behavior Analysis, The Graduate Center, City University of New York, New York	Assistant Professor Full time	PSYC 616 PSYC 662
Matthew Novak	Ph.D., BCBA-D, Applied Behavioral Science, University of Kansas	Assistant Professor Full time	PSYC 605 PSYC 669
Carrie S. W. Borrero	Ph.D., BCBA-D, Experimental Analysis of Behavior, University of Florida	Adjunct Associate Professor	PSYC 615 PSYC 663
Michelle Frank-Crawford	Ph.D., BCBA-D, Applied Developmental Psychology, University of Maryland, Baltimore County	Adjunct Assistant Professor	Coverage on an as needed basis.

Appendix 10

Table 1 Program Resources

Resource Categories	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**
1. Reallocated funds	$0	$0	$0	$0	$0
2. Tuition/fee Revenue (c + g below)	$344,250	$297,845	$438,258	$526,640	$588,934
a. Number of F/T Students	25	21	30	35	38
b. Annual Tuition/Fee Rate	$13,770	$14,183	$14,609	$15,047	$15,498
c. Total F/T Revenue (a x b)	$344,250	$297,845	$438,258	$526,640	$588,934
d. Number of P/T Students	0	0	0	0	0
e. Credit Hour Rate	$765	$788	$812	$836	$861
f. Annual Credit Hour Rate	9	9	9	9	9
g. Total P/T Revenue (d x e x f)	$0	$0	$0	$0	$0
3. Grants, Contracts & Other External Sources	$0	$0	$0	$0	$0
4. Other Sources	$0	$0	$0	$0	$0
TOTAL (Add 1-4)	**$344,250**	**$297,845**	**$438,258**	**$526,640**	**$588,934**

Program Proposal: M.A., Psychology—Applied Behavior Analysis, UMBC

Appendix 11

Table 2 Program Expenditures

Expenditure Categories	Year 1	Year 2	Year 3	Year 4	Year 5
1. Faculty (b + c below)	$0	$0	$0	$0	$0
a. Number of FTE	1.00	1.00	1.00	1.00	1.00
b. Total Salary*	$0	$0	$0	$0	$0
c. Total benefits*	$0	$0	$0	$0	$0
2. Admin. Staff (b + c below)	$0	$0	$0	$0	$0
a. Number of FTE	0	0	0	0	0
b. Total Salary	$0	$0	$0	$0	$0
c. Total benefits	$0	$0	$0	$0	$0
3. Support Staff (b + c below)	$0	$0	$0	$0	$0
a. Number of FTE	0	0	0	0	0
b. Total Salary	$0	$0	$0	$0	$0
c. Total benefits	$0	$0	$0	$0	$0
4. Technical Support and Equipment	$0	$0	$0	$0	$0
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)	$0	$0	$0	$0	$0

* The program will be taught by existing faculty and with existing support services, as such there are no new faculty costs.

UNIVERSITY SYSTEM of MARYLAND

BOARD OF REGENTS
SUMMARY OF ITEM FOR ACTION, INFORMATION, OR DISCUSSION

TOPIC: University of Maryland, Baltimore County (UMBC) Proposal for a Master of Science (MS) in Applied Data Science

COMMITTEE: Education Policy and Student Life and Safety

DATE OF COMMITTEE MEETING: September 4, 2025

SUMMARY: The UMBC Department of Computer Science and Electrical Engineering (CSEE) proposes a new Master of Science (MS) in Applied Data Science to replace the current Data Science track in the Master of Professional Studies. Designed as a rigorous, course-based, non-thesis program, the M.S. in Applied Data Science will consist of 10 courses (30 credits), including six core and four elective courses. Core courses will emphasize practical, applied skills, while electives will allow for specialization in areas aligned with students' interests and career goals.

The DMV has a regional demand for data scientists that is higher than the national average. Offered at UMBC's Catonsville campus, this program will be an affordable and accessible path to careers in data science. Innovation, entrepreneurship, and collaboration with industry and public agencies is fundamental to the program. Graduates will have in-demand skills for careers in technology, healthcare, finance, public policy, and government, supporting regional economic development and workforce supply. The program is forward-looking, preparing students with the skills and knowledge they need to adapt to evolving technologies and industries throughout their careers. UMBC is well-positioned to offer this program and contribute to meeting this timely regional workforce need.

ALTERNATIVE(S): The Regents may not approve the program or may request further information.

FISCAL IMPACT: No additional funds are required. The program can be supported by the projected tuition and fee revenue.

CHANCELLOR'S RECOMMENDATION: That the Education Policy and Student Life and Safety Committee recommend that the Board of Regents approve the proposal from UMBC to offer the MS in Applied Data Analysis.

COMMITTEE RECOMMENDATION:	DATE: September 4, 2025
BOARD ACTION:	DATE:
SUBMITTED BY: Alison M. Wrynn 301-445-1992	awrynn@usmd.edu

Office of the Provost
University of Maryland, Baltimore County
1000 Hilltop Circle
Baltimore, MD 21250

PHONE: 410.455.2333
FAX: 410-455-1107
www.umbc.edu

August 1, 2025

Jay Perman, M.D.
Chancellor
University System of Maryland
3300 Metzerott Road
Adelphi, MD 20783

Dear Chancellor Perman:

UMBC's Department of Computer Science and Electrical Engineering is pleased to submit a proposal to establish a Master of Science (M.S.) in Applied Data Science.

The M.S. in Applied Data Science will combine advanced teaching methods with state-of-the-art tools, offering rigorous academic training and hands-on, real-world projects. The program will prepare students for careers in high-demand fields such as technology, healthcare, finance, and government, with a strong foundation in data science applications across science, engineering, IT, and public policy. Emphasizing innovation, entrepreneurship, and collaboration with public and private partners, the program will support economic development and the commercialization of new ideas. It will be delivered at UMBC's Catonsville campus, offering students an affordable and accessible pathway to gain expertise in a field that is essential to Maryland's economic and technological future.

Thank you very much for your consideration of this request.

Sincerely,

Manfred H. M. van Dulmen
Provost and Senior Vice President for Academic Affairs

Cc: Crystal Williams, Assistant Vice Provost for Curriculum Development
Yonatan Harris, Executive Assistant to the Vice Provost for Academic Affairs

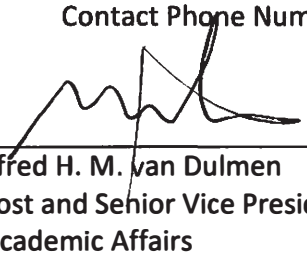
UNIVERSITY SYSTEM OF MARYLAND INSTITUTION PROPOSAL FOR

X	New Instructional Program
	Substantial Expansion/Major Modification
	Cooperative Degree Program
X	Within Existing Resources, or
	Requiring New Resources

UMBC
Institution Submitting Proposal

Applied Data Science
Title of Proposed Program

Master of Science (MS)	Spring 2026
Award to be Offered	Projected Implementation Date
070799	30.7001
Proposed HEGIS Code	Proposed CIP Code
Department of Computer Science and Electrical Engineering	Crystal Williams
Department in which program will be located	Department Contact
410-455-3862	Crysw1@umbc.edu
Contact Phone Number	Contact E-Mail Address



Manfred H. M. van Dulmen
Provost and Senior Vice President
for Academic Affairs

6/9/2025
Date

Office Use Only: PP#

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

Institution Submitting Proposal	UMBC

Each action below requires a separate proposal and cover sheet.

- (●) New Academic Program
- ( ) New Area of Concentration
- ( ) New Degree Level Approval
- ( ) New Stand-Alone Certificate
- ( ) Off Campus Program
- ( ) Substantial Change to a Degree Program
- ( ) Substantial Change to an Area of Concentration
- ( ) Substantial Change to a Certificate Program
- ( ) Cooperative Degree Program
- ( ) Offer Program at Regional Higher Education Center

Payment Submitted: (●) Yes ( ) No | Payment Type: (●) R*STARS # 3207367 ( ) Check # | Payment Amount: 850.00 | Date Submitted: 08/01/2025

Department Proposing Program	Department of Computer Science and Electrical Engineering
Degree Level and Degree Type	Graduate, Master of Science (MS)
Title of Proposed Program	Applied Data Science
Total Number of Credits	30
Suggested Codes	HEGIS: 070799 CIP: 30.7001
Program Modality	(●) On-campus ( ) Distance Education (fully online) ( ) Both
Program Resources	(●) Using Existing Resources ( ) Requiring New Resources
Projected Implementation Date (must be 60 days from proposal submisison as per COMAR 13B.02.03.03)	( ) Fall (●) Spring ( ) Summer Year: 2026
Provide Link to Most Recent Academic Catalog	URL: https://catalog.umbc.edu/
Preferred Contact for this Proposal	Name: Crystal Williams Title: Assistant Vice Provost for Curriculum Development Phone: 410-455-8907 Email: crysw1@umbc.edu
President/Chief Executive	Type Name: Manfred H. M. van Dulmen Provost and Senior Vice President for Academic Affairs Signature: [signature] Date: 6/04/2025
	Date of Approval/Endorsement by Governing Board:

Revised 4/2025

University of Maryland Baltimore County (UMBC)
Master of Science (M.S.) in Applied Data Science Narrative

A. Centrality to Institutional Mission and Planning Priorities:

1. Provide a description of the program, including and how it relates to the institution's approved mission

The UMBC Department of Computer Science and Electrical Engineering (CSEE) proposes to launch a Master of Science (M.S.) in Applied Data Science. Upon final approval, after a short transition period, the proposed M.S. in Applied Data Science will replace the existing Data Science track in the M.P.S. in Professional Studies as UMBC's primary graduate degree in the data science domain. The rigorous nature of our master's and doctoral programs is consistent with UMBC's role as one of three principal centers for research and doctoral-level training in the University System of Maryland (USM) as an R-1 (Very High) Carnegie classification. The CSEE department and College of Engineering and Information Technology (COEIT) work closely with their respective advisory boards and UMBC's Office of Institutional Advancement to build external relations to make sure that we are responsive to the regional and national needs of our industry stakeholders and providing affordable, accessible ways to effectively enhance the professionalism and diversity of Maryland's data science workforce.

Offered at UMBC's campus in Catonsville, the proposed M.S. in Applied Data Science will be a non-thesis, course-based degree consisting of 10 courses/30 credits, with six core and four elective courses. Core courses focus on the practical and applied aspects of data science. Elective courses allow students to dive deeper or specialize in more granular topics that are relevant to their personal interests or professional needs.

Table 1: List of frequently used abbreviations and their full names.

Abbreviation	Full Name
COEIT	College of Engineering and Information Technology
CSEE	Computer Science and Electrical Engineering
DOIT	Division of Information Technology
DPS	Division of Professional Studies
M.S.	Master of Science
M.P.S.	Master of Professional Studies
UMBC	University of Maryland Baltimore County
USM	University System of Maryland

The program will integrate advanced teaching methodologies with cutting-edge tools of data science. Students will not only receive rigorous academic training but also engage in real-world projects, benefiting both the university community and the citizens of Maryland. The program will provide academically talented students with a strong foundation in data science, preparing them for further graduate and professional study in specialized fields. Graduates will be equipped with the skills and knowledge necessary for professional careers in data science-related industries. By focusing on areas such as science, engineering, information technology, econometrics, and public policy, the program will contribute directly

to the economic development of the state and region. Graduates will be equipped with highly sought-after skills that are essential for driving innovation and growth in industries such as technology, healthcare, finance, and government. The program will foster an entrepreneurial mindset among students, encouraging them to innovate and create new solutions using data science technologies. Through collaborations with public agencies and the corporate community, students will have opportunities to commercialize their ideas and contribute to the development of new products and services. UMBC is dedicated to fostering a diverse and inclusive learning environment, and the M.S. in Applied Data Science program will reflect this commitment by welcoming students from diverse cultural and ethnic backgrounds. Additionally, the program will promote lifelong learning by providing students with the skills and knowledge they need to adapt to evolving technologies and industries throughout their careers.

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

As presented in the USM 2020 Strategic Plan's Theme 2: Maryland's Economic Development and the Health and Quality of Life of Its Citizens-Ensuring Maryland's Competitiveness in the New Economy, a major goal is to enhance programs essential to the state's overall competitiveness in critical areas such as STEM, education, health care, data science. The USM Strategic Plan also provides a call to "Fuel Maryland's knowledge-based economy and enhance the quality of life of its citizens by increasing the number of graduates produced in workforce areas that are key to the state's ability to thrive and compete (including STEM, education, nursing, health care, data science, and other disciplines) and promoting improved health care and other critical services." (p.16) By launching this new graduate degree program, UMBC expects to continue directly contributing to USM's strategic priorities by creating a new graduate degree to help meet these critical needs in the State and region.

UMBC's Strategic Plan declares "UMBC is a dynamic public research university integrating teaching, research, and service to benefit the citizens of Maryland ... UMBC contributes to the economic development of the state and the region through entrepreneurial initiatives, workforce training, K-16 partnerships, and technology commercialization in collaboration with public agencies and the corporate community. UMBC is dedicated to cultural and ethnic diversity, social responsibility, and lifelong learning" (p.5). Data-related initiatives are identified as an institutional priority, which UMBC is already actively involved with through innovative education, research, and assorted local, regional, and global partnerships. These goals are reflected in UMBC's institutional priorities and aligned with the USM's 2020 Strategic Plan and the 2022 MHEC Statewide Plan[1].

3. Provide a brief narrative of how the proposed program will be adequately funded for at least the first five years of program implementation.

The program will be funded entirely through tuition revenues managed by the Division of Professional Studies (DPS). Additional support services such as technology support, library services, marketing, and related academic/program support will be drawn from UMBC's existing institutional capabilities. Special learning experiences, research opportunities, and/or technologies for students may be funded through faculty-led grant efforts, such as UMBC's federal Scholarship-for-Service program, and/or obtained via internships with local companies or government organizations, including BWTECH.

[1] http://dlslibrary.state.md.us/publications/Exec/MHEC/ED11-105(b)(3)(i)_2022.pdf (visited April 3, 2024)

4. **a) Provide a description of the institution's a commitment to ongoing administrative, financial, and technical support of the proposed program.**

Data-related studies like data science are an institutional priority under UMBC's Strategic Plan. As such, and since data science across government and industry sectors continues to be a critical concern for Maryland and the world, UMBC is committed to providing the necessary administrative, financial, and technical support to launch, grow, and sustain this master's in applied data science. Technical support for students and faculty is available through Blackboard and other web-based technologies supported by UMBC's Division of Information Technology (DOIT), in-class time, and faculty office hours.

b) Provide a description of the institution's a commitment to continuation of the program for a period of time sufficient to allow enrolled students to complete the program.

The launch of this new graduate degree will present no challenge or obstacles to currently enrolled (or future) students from completing their graduate studies in data science at UMBC.

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.**

UMBC's first graduate data science program, the Data Science track in the Master of Professional Studies (M.P.S.), was launched in response to a critical and compelling regional need for qualified data science professionals. This initiative was driven by a focus group consultation, which included input from federal, state, and local employers in the Baltimore and Washington metropolitan areas, who identified a growing demand for skilled talent in the field of data science. At the time of its launch, there were limited graduate programs in data science within Maryland, making UMBC's program a vital resource for meeting the increasing workforce demand for data scientists. The program was strategically designed to address this need and is now offered at UMBC's Main Campus.

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

The 2022 MHEC Statewide Plan[1] recognizes data science and IT fields as key industries for Maryland's development, highlighting the importance of public universities like UMBC offering such in-demand programs. This not only provides affordable and accessible education but also creates a robust pool of highly educated future employees to meet critical workforce needs in the state. Furthermore, offering a graduate degree in data science aligns with MHEC's goals and guidance, reflecting Maryland's higher education priorities. The program supports lifelong learning and career development for working professionals, reinforcing its relevance in the rapidly evolving field of data science.

The 2022 MHEC Statewide Plan also emphasizes the need for expanded STEM and data science education in Maryland, a goal that UMBC's Data Science program directly supports. Initiatives and legislation from the state government, such as the establishment of the Maryland Institute for Innovative Computing (MIIC) and the Maryland Technology Internship Program (MTIP), further enhance UMBC's commitment to preparing students for real-world data science challenges and opportunities within the state.

The 2022 State Plan for Higher Education was ratified by the Maryland Higher Education Commission on June 22, 2022. In January 2024, the Governor also issued an executive order on digital services[2]. The latter executive order provides detailed guidance on the responsible and ethical use of AI and Data. It also establishes an AI Subcabinet tasked with developing and implementing a comprehensive AI action plan to operationalize the State's AI principles and establish appropriate "guardrails" for agencies' use of AI. Additionally, the AI Subcabinet will promote AI knowledge, skills, and talent in state government, further driving demand for Data Science programs. In the closely related field of AI and Machine Learning, Governor Moore has announced significant initiatives to revitalize state government and modernize Maryland's Department of IT Services and Operations, positioning Maryland at the forefront of cutting-edge and emergent technology to better serve the state. This includes the appointment of a first-ever AI advisor to oversee Maryland's AI strategy[3,4].

The data science field presents ongoing and compelling needs in the region, and UMBC's M.S. in Applied Data Science is well-positioned to address these needs by fostering knowledge advancement and addressing critical societal demands. Leveraging UMBC's established reputation and a flexible curriculum, the program is poised to meet the growing demand for skilled data science professionals, directly supporting the goals of the 2022 MHEC Statewide Plan and USM Strategic Plan. UMBC's commitment to innovation and education in data science allows prospective students to upgrade their skills to meet the evolving job market requirements, ensuring that Maryland remains competitive in the data science industry.

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

1. The Master's in Applied Data Science program will open up various employment opportunities in the rapidly growing field of data science. Graduates can pursue careers in technology, finance, healthcare, government, and education. The table below lists some potential job roles and their expected entry levels:

Table 2: A list of potential job roles of the future graduates of the proposed program.

Job Title	Expected entry level and responsibilities
Data Scientist	Entry Level: Junior Data Scientist, Data Analyst Responsibilities: Analyzing data, building predictive models, presenting insights to stakeholders
Data Analyst	Entry Level: Junior Data Analyst, Statistical Assistant Responsibilities: Collecting and analyzing data, reporting findings to businesses, identifying trends and patterns

[2] https://governor.maryland.gov/news/press/pages/governor-moore-announces-action-to-transform-maryland-executive-branch-digital-services.aspx (visited April 3, 2024)

[3] https://governor.maryland.gov/news/press/pages/governor-moore-announces-major-action-to-rebuild-state-government-and-modernize-maryland-department-of-information-technolo.aspx (visited April 3, 2024)

[4] https://baltimorefishbowl.com/stories/marylands-it-department-adds-new-roles-including-leaders-in-ai-and-accessibility/ (visited April 3, 2024)

Data Manager	Entry Level: Data Project Manager, Junior Data Manager Responsibilities: Overseeing data flow and processes, ensuring data integrity, managing data architecture
Data Architect	Entry Level: Junior Data Architect Responsibilities: Designing and implementing data architecture, managing databases, ensuring data security
Data Engineer	Entry Level: Junior Data Engineer Responsibilities: Preparing raw data for analysis, developing data architecture and tools, testing and maintaining data systems
Business Analyst	Entry Level: Junior Business Analyst Responsibilities: Analyzing business processes, identifying opportunities for improvement, communicating technical information to businesses
Software Engineer	Entry Level: Junior Software Engineer, Software Development Intern Responsibilities: Designing and developing software systems, maintaining software applications, collaborating on software projects
Machine Learning Engineer	Entry Level: Machine Learning Engineer, Machine Learning Solutions Lead Responsibilities: Developing AI systems and machines, applying machine learning algorithms, testing and launching advanced tools
Data Modeler	Entry Level: Data Modeler, Modeling Geologist Responsibilities: Building database blueprints, ensuring data accessibility and usability, consulting with executives on data standards

These roles offer a wide range of opportunities for individuals with skills in data analysis, programming, statistics, and machine learning.

2. At the global level, Forbes[5] projects that the data science market will reach $407 billion by 2027 and is expected to contribute a substantial 21% net increase to the United States GDP by 2030. Furthermore, 64% of businesses believe that data science will enhance their overall productivity, indicating growing confidence in its transformative potential.

   Our region, the National Capital Region comprising MD-DC-VA, has become the nation's second-largest hub for data science-related employment, trailing only California. This surge is primarily propelled by a comprehensive adoption of AI within federal government agencies, including the Department of Defense (DoD), and by private sector providers of defense and aerospace products, software, and services.

   According to a recent report[6], the National Capital Region accounted for 7.54% of AI job postings, which was approximately half the share of IT job postings (14.05%) and slightly higher than its share of all job postings (6.36%) in 2018. By 2023, the situation underwent a significant change. The region's portion of AI job postings rose to 12.63%, ranking second only to California's 19.03%. This figure now aligns closely with the region's share of IT job postings (12.77%) and is more than double its share of all job postings (5.83%).

[5] https://www.forbes.com/advisor/business/ai-statistics/#sources_section

[6] UMD-LinkUp AI Maps, "From West to the Rest: Growing Geographic Dispersion of AI Jobs in America," page 15, Jan. 2024.

This surge in demand is fueled by widespread adoption of AI across various U.S. federal government agencies, including the Department of Defense. Many key suppliers of equipment, software, and services to federal agencies and the DoD are located in the MD-DC-VA region. Notable companies include Northrop Grumman, Lockheed Martin, Huntington Ingalls, Booz Allen Hamilton, Accenture, and Deloitte. Additionally, the region is home to Amazon HQ2 and Capitol One's corporate headquarters.

Data from Stanford University's AI Annual Report[7] show significant growth in data science-related job openings in Maryland, making it one of the leading states in AI job gains between 2018 and 2023.

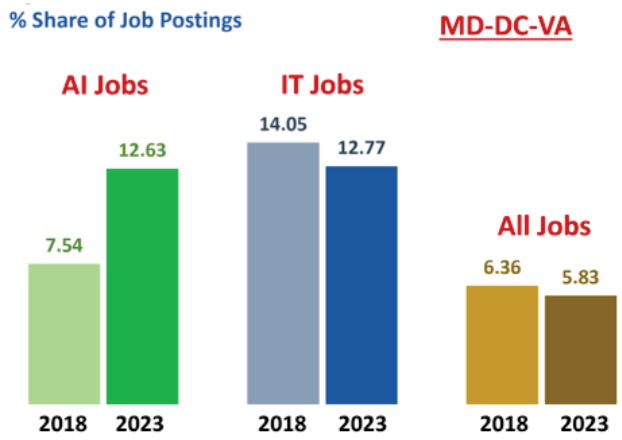


Figure 1: Number of artificial intelligence (AI) and information technology (IT) jobs in National Capital Region 2018 vs. 2023. Source: https://www.aimaps.ai/download/whitepaper-sheets/from-west-to-the-rest-(white-paper1).pdf

According to Lightcast, a labor market analytics tool, the Baltimore and Washington DC metropolitan areas are hotspots for data science-related jobs. When queried about the number of job postings over the past 10 years for data science, Lightcast[8] reported that there were 4,848 job postings in the Baltimore and Washington DC MSAs, as compared to 1,333 for the national average, showing that the regional demand for data scientists was much higher than the national average.

3. In October 2023, President Joe Biden and Secretary of Commerce Gina Raimondo designated Baltimore as one of 31 "federal tech hubs." This designation[1] will unlock tens of millions of dollars in funding across the region, part of a nationwide initiative aimed at maintaining American competitiveness in various technological fields. Following this announcement, Baltimore anticipates significant advancements in machine learning, artificial intelligence, and biotechnology, particularly focusing on leveraging data to inform clinical decisions and enhance patient outcomes. With this designation, our city becomes eligible for approximately $500 million in federal funds allocated for projects in the area over the next five years. According to the Greater Baltimore Committee[9], this tech hub designation is projected to generate $3.2 billion in economic impact and create 52,000 jobs over the next five years. Therefore, it's imperative to provide training for business professionals, particularly in the application of AI within the biotech sector, to support our local economy.

[7] https://aiindex.stanford.edu/report/
[8] https://professionalprograms.umbc.edu/data-science/job-data-data-science/
[9] https://gbc.org/greater-baltimore-committee-issues-rfp-for-new-regional-brand-narrative/ (visited April 3, 2024)

4. The table below shows the number of students enrolled in the Data Science track of the MPS from 2020 to 2024. The rapid increase in the early years was due to the rising demand for data science professionals and there were not many graduate programs focusing on data science. Since 2020, the number of graduate programs in data science increased exponentially, please see figure below.

Table 3: Number of graduate data science students at UMBC since 2020.

	Fall 2020	Fall 2021	Fall 2022	Fall 2023	Fall 2024
No. of students	158	274	525	609	424

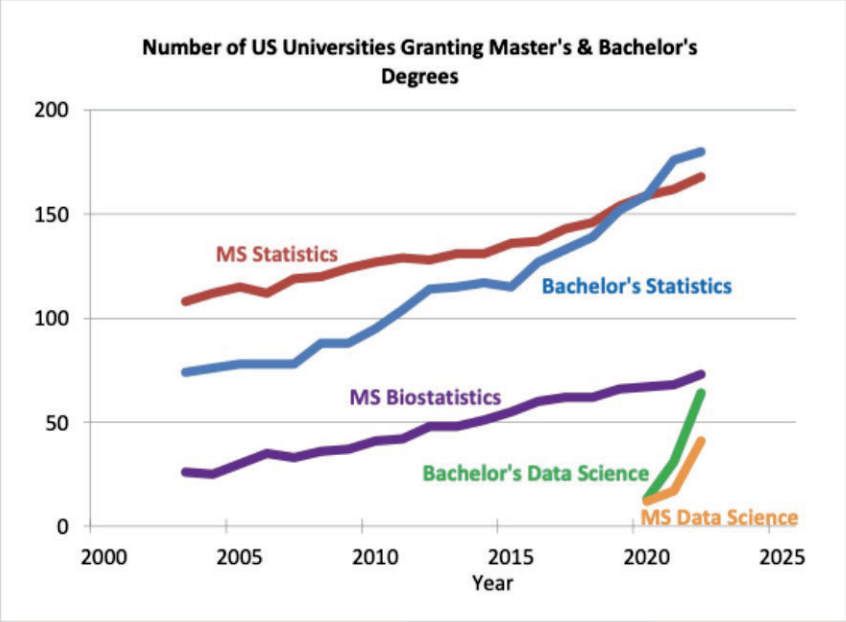


Figure 2: The number of universities granting statistics, biostatistics, and data science master's and bachelor's degrees. Compiled from NCES IPEDS data. Source: https://magazine.amstat.org/blog/2023/12/01/degreesstats2022/

For Fall 2024, we have received more than 1400 applications for the Data Science track of the existing MPS program. Because of constrained resources, we admitted a small fraction of them. We expect and plan to keep the number of newly enrolled students around 100 in the following five years of the proposed new MS program.

D. Reasonableness of Program Duplication:

1. UMBC's DPS identified and compared data science programs in the region. UMBC believes that this proposed M.S. in Applied Data Science program aligns with and supports the 2022 MHEC Statewide Plan and USM's Strategic Plan. While some program overlap may exist with other data science programs, UMBC's goal is to offer flexibility, affordability, and accessibility to students looking to upgrade their skills and meet the growing workforce demands.

2. A comparison of regional programs with UMBC's proposed M.S. in Applied Data Science is provided in Appendix 2.
3. UMBC, as a Center of Academic Excellence, is well-positioned to offer this M.S. in Applied Data Science program, which equips students with the necessary skills for data-driven careers in management, analysis, research, and more.
4. As described in sections B and C, there is very strong market demand in the MD-DC region for master's trained data scientists. Some of this need is already being filled by UMBC's existing Data Science track in the Master of Professional Studies. This is a proposal to transform the existing program into the MS format, with no plans to increase enrollment and thus no harm to other existing data science programs as UMBC continues to meet the part of the strong market demand for graduates that it is already meeting.

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

1. We identified two recently established graduate data science programs at HBIs. One is at Morgan State University (MSU), and the other is at University of Maryland Eastern Shore (UMES).
2. MSU's program has a stronger focus on data visualization, while UMBC's proposed program has a more general focus on data science. Students in the MSU program take four to five course per semester and complete the program in one year. The UMBC program is designed for working professionals to take two to three courses and complete the program in two years. With no increase in enrollment planned for the proposed UMBC M.S. in Applied Data Science over the existing Data Science track in the UMBC MPS, we anticipate no impact or harm to the program at MSU.
3. In addition to having very little overlap, the M.S. in Data Science offered at UMES is in a different geographical location and best suited to serve the needs of Maryland's population in the Delmarva peninsula, whereas UMBC is better suited for students residing in the greater Baltimore metropolitan region. We anticipate no impact or harm to the UMES program.
4. While some other related programs may exist, UMBC's program focuses on the interdisciplinary nature of data science, providing students with a broad skill set to excel in the field.

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

1. The proposed new program in Applied Data Science merely transforms the current track in the MPS to an MS and is not expected to impact the identity or mission of any HBIs.

G. Adequacy of Curriculum Design, Program Modality, and Related Learning Outcomes

1. This practitioner-oriented curriculum was developed by faculty within the UMBC Department of CSEE, drawing upon their expertise in the areas of data science and related disciplines. CSEE's industrial advisory board members also provide expert insights that inform the program. Program faculty, as subject-matter experts, also regularly discuss emerging trends or current events that may require updating or creation of curricular modules and/or incorporating specialized instructional tools/platforms such as Python, R, Jupyter, Hadoop, Spark, and other data science tools into the curriculum.

   The M.S. in Applied Data Science will be overseen by a full-time Graduate Program Director (GPD) and four full-time members of the CSEE faculty with a strong background in data science. The GPD, as a direct report to the Chair of Computer Science and Electrical Engineering, is supported as needed by the Chair in matters related to faculty/program oversight, mentoring, and related issues. The GPD also works with the UMBC DOIT, CSEE's IT office, DPS IT staff, and other campus leaders on technology innovations related to the program or any new learning capabilities/platforms deployed, such as data science labs and data analysis environments. The Data Science Graduate Program Director is a member of the Computer Science

Graduate Committee and works with that committee on areas of mutual interest and oversight, including recruiting, cross-program collaboration, new course ideas, and program innovations.

2. The curriculum in the M.S. in Applied Data Science program will offer a comprehensive foundation in data science principles and practices, beginning with an introduction to the field where students learn the essential concepts and tools. Students will then delve into data analysis and machine learning, gaining skills to build and evaluate models. Big data processing platforms are explored to handle large datasets efficiently, and data management techniques are taught to ensure data integrity and accessibility. A course in probability and statistics equips students with the necessary quantitative skills, culminating in a capstone project that allows students to apply their knowledge in a practical, real-world scenario.

   Students will be able to tailor their education by selecting at least four electives from the ten different pathways offered in varying formats. The pathways are:

   - Advanced computing and analytics,
   - Cybersecurity,
   - Data science analytics,
   - Economics/econometrics,
   - Healthcare analytics,
   - Management sciences,
   - Policy analysis,
   - Aging studies,
   - Project management, and
   - Clinical Informatics.

   These pathways offer elective courses aligned with their background and interests, enabling them to specialize in areas most relevant to their career goals.

   Additionally, the program will offer a suite of specialized DATA courses. Students will explore ethical considerations and privacy issues in data science, develop leadership skills specific to the field, and understand the mathematical foundations of machine learning. Courses on data structures and algorithms, data visualization and communication, deep learning, and natural language processing will provide further depth. Students will be able to study artificial intelligence and apply data science techniques to finance, ensuring they are well-rounded and prepared for diverse opportunities in the data science domain.

   As a program targeting adult learners and working professionals, courses in this proposed degree will be taught in in-person, hybrid, and online modalities to provide greater flexibility and accessibility to students. As with other workforce-oriented graduate programs in the region focusing on the data science discipline, students completing the core M.S. in Applied Data Science curriculum will be expected to:

   a. Successfully demonstrate knowledge of interdisciplinary data science principles, practices, theories, operational insights, industry organizations, and technologies associated with data science. (SLO-1)
   b. Effectively identify and analyze data, apply statistical and machine learning techniques, and make data-driven decisions. (SLO-2)
   c. Understand the role of data science within modern organizations and appreciate its assorted social/legal/policy/ethical issues. (SLO-3)

d. Demonstrate the ability to conduct scholarly and/or professional-level research and the various skills necessary in the data science profession such as team collaboration, critical thinking, time management, and effective communication. (SLO-4)

3. Learning outcomes to assess the program's success in meeting these objectives are included in Appendix 4. The UMBC Graduate School, COEIT, Department of CSEE, DPS, and Provost's Office track enrollments, retention, time-to-degree, and graduation rates for all programs. The Division of Professional Studies also is developing tools and mechanisms to track career placements. Appendix 6 describes the mechanisms used by the program to assess and document student learning competencies/outcomes (SLOs) in support of program objectives.

4. The M.S. in Applied Data Science program consists of 30 credits divided into 18 credits in the degree core and 12 credits as electives. The degree core includes a 3-credit capstone project research course. For increased curriculum flexibility, there is no set sequence of required courses, except that the project course (DATA 606) generally is taken after the other core courses have been completed successfully, and that students new to data science are encouraged to start with DATA 601 in their first semester. Additionally, prospective students holding certain current industry certifications may, upon proper documentation, request waiving DATA 601 and using another course to satisfy requirement (usually a fifth elective). Core courses are aligned with the needs and expectations of the data science industry and practitioners. Given the interdisciplinary nature of the data science field and the need to present students with the opportunity to be flexible in their study foci based on their specific interests or needs, they may take appropriate electives from another program or department to fulfill their credit requirements after consultation with their advisor to determine the course's relevance to the degree program and the student's qualifications. Students also may receive credit for conducting appropriate independent study projects or participating in industry or government-centric internships in the data science domain. Degree requirements for the M.S. in Applied Data Science are contained in Appendix 3. Course descriptions for core courses and electives owned by the Data Science program are shown in Appendix 7.

5. GenEd Requirements: N/A

6. Accreditation or Certification Requirements: N/A

7. Other Institutions or Organizations: The department does not currently intend to contract with another institution or non-collegiate organization for this program.

8. Assurances of Student Support: Detailed in Appendix 5.

9. The primary audience for the M.S. in Applied Data Science is early-to-midcareer working professionals in data science or related fields from government or industry within Maryland. Local and regional marketing will be conducted by the DPS, while national and international marketing is handled by the UMBC Graduate School. Marketing is accomplished via the program's website, department website, and other local or global marketing sites/activities by the Graduate School, COEIT, and DPS. All marketing materials and websites are reviewed regularly to ensure currency and accuracy of courses, degree paths, job outlooks, technology requirements, etc. Working with the Graduate School, COEIT, and DPS, the GPD is involved in the development and approval of degree marketing outreach to ensure it accurately reflects the program and services available at UMBC.

The M.S. in Applied Data Science program website, FAQ, advising information, syllabi, and marketing outreach will provide students with clear, complete, timely, and accurate information. This information will be on the program curriculum, course and degree requirements, how students and faculty will interact (both in class and for advising purposes), the expected/desired technology competencies, minimum technical requirements (e.g., computer and internet capabilities), identify the Learning Management System (LMS), and the range of academic policies and support services available (e.g., financial aid, degree completion, payment policies, academic integrity, etc.). Additional information for students may be found on the UMBC Graduate School, Registrar, Student Business Services, and Veterans Affairs websites.

As of Fall 2024, UMBC's existing Graduate Data Science Program is 62% male and 38% female. The program's diversity is significantly higher both for minority representation (40% vs. 26%) and for women (38% vs. 17%) compared to the broader data science field.

10. The M.S. in Applied Data Science requires 30 credits and 10 courses, as shown in Appendix 3. Appendix 7 provides descriptions for these courses.

H. Adequacy of Articulation - N/A

I. Adequacy of Faculty Resources

1. Faculty supporting the program are full-time, tenured, or tenure-track and hold terminal degrees in their respective fields. Specific course assignments have not yet been made and change on a regular basis. Appendix 8 lists faculty supporting the M.S. in Applied Data Science. Additional adjunct faculty may be included in the future based on program requirements.

2. Faculty teaching in this program have access to instructional development opportunities available via the UMBC Center for Applied Learning and Teaching (CALT) and other on-campus professional development activities. For any online elements of coursework, faculty can work with UMBC's own instructional design team to incorporate best (and accessible) practices when teaching in the online environment. UMBC's DOIT offers on-demand and in-person assistance to faculty on the use of Blackboard's many features to help ensure the platform fosters a quality learning experience for students and faculty, regardless of in-person, hybrid, or online modalities. Program and department faculty are encouraged to share best pedagogical practices with colleagues in this program and the broader CSEE department. Several internal grant opportunities exist to support innovation in faculty pedagogy as well.

J. Adequacy of Library Resources

1. On behalf of UMBC's President and Librarian, the Science Librarian of the Albin O. Kuhn Library has assessed the library resources required for this program. The assessment concluded that UMBC's library can meet the curricular and research needs of the M.S. in Applied Data Science program faculty and students with its current expansive in-person and online resources. (Note: To facilitate greater accessibility and affordability for students, wherever possible and practicable, UMBC's Graduate Data Science Program uses open-access materials and publicly available resources for instructional and enrichment activities.)

2. No additional library resources are required.

K. Adequacy of Physical Facilities, Infrastructure, and Instructional Equipment

1. UMBC has access to excellent resources and facilities for this program at its campus locations. There are sufficient classrooms and conference rooms at the Catonsville and Shady Grove campuses to accommodate students, all equipped with technology and software to support instruction, collaboration, and communication. UMBC's internet, software, and computing capabilities are more than adequate to meet program needs – including data science lab environments to facilitate data analysis, machine learning, and big data processing.

2. a) All faculty and students are assigned a UMBC institutional email address. Email is the primary form of outreach on campus and in the program.

   b) All faculty and students have access to the University's learning management system (Blackboard Ultra) for classroom and research purposes, in addition to other online collaborative tools supported by UMBC's DOIT such as Microsoft Office/360, Google Suite, and Webex. Should it be necessary, UMBC is well-equipped to handle pivots to remote learning, such as due to pandemics or weather emergencies. Faculty who want to take a deliberate and holistic approach to prepare their hybrid courses may be supported by UMBC's Planning Instructional Variety for Online Teaching (PIVOT) program. PIVOT focuses on best practices for using online instruction tools such as Blackboard, Panopto, Voice Thread, etc., that are also available at UMBC. To ensure access to instructional, research, and collaboration tools, the minimum computing requirements and technical competency expectations for students are posted on the program's website.

L. Adequacy of Financial Resources with Documentation

The M.S. in Applied Data Science will be self-supported through tuition revenue with the potential of receiving industry and faculty research support over time. As it is anticipated that enrollments will generate sufficient revenue to more than cover expenses, there is no significant financial impact with this proposal. As with all self-supporting graduate programs at UMBC, enrollment growth will be regularly monitored, additional full-time faculty will be hired, and/or existing part-time faculty will be invited to become full-time faculty to facilitate instruction and program activities across two campus locations. See Appendix 10 and 11 for program budget information.

M. Adequacy of Provisions for Evaluation of Program in Data Science

1. The CSEE faculty periodically reviews syllabi, rubrics, readings, labs, and projects to ensure a standard student experience and that materials used and presented remain relevant to and/or aligned with current industry trends, and best practices in the discipline, program objectives, and institutional priorities. The Department of CSEE and the university as a whole evaluate full-time faculty through the established promotion and tenure process in the traditional areas of teaching, research, and service. This process includes a review of their syllabi, labs, courseware, samples of student products, classroom observation, and student surveys. Adjunct faculty are evaluated by full-time faculty members regularly to ensure the quality of instruction, materials, and the student's course experience.

All faculty members at the university are evaluated via student surveys issued at the end of each semester. The data from these surveys are shared with the instructors and are publicly available, while any qualitative comments received are shared only with the instructors. Additionally, faculty are encouraged to work with their colleagues and the university's Center for Applied Teaching and Learning (CALT) or DOIT for additional opportunities to conduct objective course assessment and/or enhancement. The Graduate Program Director likewise solicits, investigates, and attempts to resolve any student concerns regarding course or instructor quality and/or effectiveness.

2. Program evaluation in Data Science is carried out through the assessment of learning outcomes. The primary outcomes for the M.S. in Applied Data Science and methods of outcome assessment are identified in Appendix 4. Along with the program and department, the COEIT Dean's Office regularly reviews student enrollment, retention, culture, and financial data from a strategic perspective to ensure program outcomes are aligned with the college's goals and the university's strategic plan. The university's Provost Office also engages in strategic and financial reviews of all programs. Exit surveys are conducted each year by the Office of Professional Programs as another gauge of the student educational experience and program quality.

   The university's accountability obligation includes a requirement that each academic program be reviewed periodically. Accordingly, the university conducts academic program reviews (APR) to gauge program effectiveness. The APR process serves purposes such as quality assurance, quality improvement, accountability, identification of strategies for improvement, and providing the institution with information for prioritization of resources.

   Taken together, the university has a robust, multi-stakeholder method to assess academic program effectiveness, learning outcomes, student retention, student/faculty satisfaction, and cost-effectiveness in the Data Science program. These methods are supported by continual internal evaluation of industry trends and needs to ensure the program continues to meet current and future industry and workforce requirements.

N. Consistency with the State's Minority Student Achievement Goals

1. UMBC was designated a Minority Serving Institution in 2017 and has a strong track record of producing graduates from diverse backgrounds in various fields, including Data Science. The university is pleased to report that minority representation enrolled in its Graduate Data Science Program is significantly higher both for minority representation (40% vs. 26%) and for women (33% vs. 17%) than the broader Data Science field.

   The university's Spring 2024 Diversity Report is available online.[10]

O. Relationship to Low Productivity Programs Identified by the Commission - N/A

P. Adequacy of Distance Education Programs in Data Science

[10] https://provost.umbc.edu/wp-content/uploads/sites/46/2024/05/UMBC-2024-Cultural-Diversity-Report.pdf

The proposed new M.S. in Applied Data Science may not be completed entirely online. However, as a program targeting adult learners and working professionals, courses in the proposed M.S. in Applied Data Science will be taught in-person, hybrid, and online modalities to provide maximum flexibility and accessibility to students in this critical field. This practitioner-oriented curriculum was developed by faculty within the Department of CSEE, drawing upon their expertise in Data Science and related disciplines. The program faculty and industrial advisory board members provide expert insights that inform the program. Program faculty also regularly discuss emerging trends or current events that may require updating or creating curricular modules and/or incorporating specialized instructional tools/platforms into the curriculum.

As part of the degree program, the online elements of this M.S. in Applied Data Science will be overseen by a full-time Graduate Program Director and four full-time members of the faculty with a strong background in Data Science. The GPD, as a direct report to the Chair of the CSEE Department, is supported as needed by the Chair in matters related to faculty/program oversight, mentoring, and related issues. Additionally, the Data Science Graduate Program Director is a member of the Computer Science Graduate Committee and works with that committee on areas of mutual interest and oversight, to include new course ideas and program innovations. The minimum computer and technical requirements for students are posted on the program's website. Technical support for the university's platforms is provided by the DOIT upon request to the Help Desk Request Tracker.

Students enrolled in online or hybrid elements of this program have access to the same technology support resources as all university students, including through the DOIT, Career Services, Off-Campus Student Services, Office of Equity and Inclusion, and the Graduate Student Association, among many others. Depending on the demands of the program, additional staff and resources may be allocated to assist as necessary, such as those on the Office of Professional Programs Student Success team. The university's library is well-equipped to support remote research and learning, offering a comprehensive suite of resources both online and in-person.

In addition to using the university's learning management system or producing their own instructional materials supporting online course modalities, faculty wishing to take a deliberate and holistic approach to prepare or modify their online or hybrid courses are supported by the Academic Success Center (for students) and Faculty Development Center (for instructors). Faculty teaching in online or hybrid modalities have access to instructional development opportunities through the Active Learning, Inquiry Teaching (ALIT) certificate program and Innovation for Teaching Effectiveness (INNOVATE) certificate program and other on-campus professional development activities and can work with the university's own instructional design team to incorporate best practices when teaching in hybrid or online environments.

Students enrolled in an online modality may conduct all necessary transactions entirely online. Official information about curriculum updates, new courses, internships, graduation deadlines, etc., are conveyed to students via the student email list as the program's official distribution medium and/or directly to the students who are on email lists maintained by the university's Graduate School (for graduations and academic affairs), Registrar (for scheduling), Student Business Services (for costs and financial aid), or other campus entities.

The university's Office of Accessibility & Disability Services (ADS) ensures that students with disabilities are afforded an equal opportunity to participate in and benefit from the programs, services, and activities

of the University through the provision of accommodations and reasonable modifications that result in equal access and full inclusion, reflecting the university's commitment to fostering an accessible and inclusive environment for all members of the community. Assistance from the ADS team is available to all university students regardless of learning modality.

Quality assurance of the curricular online components of the program is identical to those described in Section M above. Additional QA support and guidance regarding online learning may be requested from the university's DOIT or CALT when necessary or appropriate.

Appendix 1

Education and Training Needs by Source

According to the Bureau of Labor Statistics' Occupation Outlook Handbook, 'Data Scientist' is one of the most rapidly growing occupations in data and information analysis. Over the next decade, the job of a Data Scientist is projected to experience significant growth, with a 10-year growth rate of approximately 35%. In addition, Data Scientists command a competitive national average salary of $110,000. The data analytics industry is expected to see a substantial increase in demand, resulting in approximately 21,000 new job openings for Data Scientists each year, on average, over the next ten years. These job openings will primarily arise from workforce transitions to other fields, such as machine learning engineering and retirements from the labor force.[11]

The Baltimore-Washington region, in particular, has emerged as a vibrant hub for data science professionals. According to information gathered from *Lightcast*, a labor market analytics tool, there were 21,342 data science-related job postings in the Washington and Baltimore Metropolitan Statistical Area (MSA) in 2021. This surpasses the national average for an area of similar size, which stands at 5,250 job postings. The job posting activity in this region is also notably robust, with a monthly average of 1,834 postings in the Washington-Baltimore area, compared to the national average of 463 postings for an area of comparable size. Key employers in the region seeking data science talent include federal and state government agencies, major tech companies like Amazon, data science consultancies such as Deloitte and Accenture, and leading financial institutions like Capital One, among others.[12]

Moreover, as highlighted in the book 'The Industries of the Future' by Alec Ross (2016), the field of data science is undergoing a remarkable transformation. Over the two decades spanning from 2000 to 2020, the data analytics and machine learning market has expanded from a $3.5 billion industry with a small cadre of IT professionals to a colossal $175 billion market that plays a crucial role in supporting and enhancing the operations of a wide range of businesses, both large and small. The significance of data science in shaping the future of various industries cannot be overstated, and it is poised to continue its rapid growth and impact on numerous sectors.[13]

[11] https://www.bls.gov/ooh/math/data-scientists.htm

[12] Lightcast Labor Market Analytics Tool (Data on file)

[13] Ross, A. (2016). The Industries of the Future. Simon & Schuster.

Appendix 2

Greater Baltimore Metropolitan Region Program Duplication Discussion

Programs are listed alphabetically according to the name of the university that offers the program

Capitol Technology University (CTU)

CTU offers a Technical MBA in Business Analytics and Data Science, focusing on combining business management principles with data science and analytics skills. In contrast, UMBC's M.S. in Applied Data Science program is a more technically intensive curriculum designed to provide in-depth knowledge and practical skills in various aspects of data science.

Similarities

1. Core Emphasis on Data Science Fundamentals:

i. Both programs emphasize core data science concepts such as statistics, data analysis, big data, and analytics.

ii. Courses in both programs require an understanding of fundamental statistics.

2. Big Data and Analytics Systems:

i. Both programs include coursework related to big data management and analytics systems.

ii. Capitol's MBA-520 (Big Data Warehousing and Analytic Systems) and UMBC's DATA 603 (Platforms for Big Data Processing) cover similar content on handling large datasets and using big data technologies.

3. Applied Statistics:

i. Capitol's MBA-515 (Applied Statistics and Visualization for Analytics) and UMBC's DATA 608 (Probability and Statistics for Data Science) cover applied statistical methods and their relevance to data analysis.

Differences

1. Program Focus and Structure:

i. Capitol Technology University: The focus is on integrating business management with data science. The curriculum includes management courses and strategic decision-making alongside analytics.

ii. UMBC: The program is purely focused on data science, with a strong emphasis on technical skills, machine learning, and data management without a direct focus on business management.

2. Core Curriculum Content:

i. Capitol Technology University: MBA core courses (24-27 credits) include management subjects like Financial Management (MBA-615), Organizational Behavior (MBA-625), and Strategic Management (MBA-650), which are not covered in UMBC's M.S. program.

ii. UMBC: Core courses include specialized data science topics such as Data Structures and Algorithms (DATA 612), Machine Learning (DATA 602), and Data Management (DATA 604).

3. Technical Depth:

i. Capitol Technology University: The program provides a broader overview with courses such as Analytics and Decision Analysis (MBA-510) and Web Analytics (MBA-540). These courses integrate business decision-making with technical analytics skills.

ii. UMBC: Offers deeper technical content in data science with courses such as Deep Learning (DATA 621), Natural Language Processing (DATA 622), and Practical Deep Learning (DATA 621), focusing on advanced computational methods.

4. Capstone and Project Work:

i. Capitol Technology University: Does not explicitly mention a capstone project in the provided course list.

ii. UMBC: Includes a Data Science Project course (DATA 606), which provides hands-on experience with real-world data science projects, ensuring students apply their skills in practical scenarios.

5. Leadership and Ethical Issues:

i. Capitol Technology University: Courses like MBA-627 (Impact of Emerging Technology on Management and Public Administration) cover technology's impact on management and public policy, providing a broader context to data science applications.

ii. UMBC: Includes courses such as Ethical and Legal Issues in Data Science (DATA 605) and Leadership in Data Science (DATA 607), focusing specifically on ethical, legal, and leadership aspects within the data science domain.

While both CTU's Technical MBA in Business Analytics and Data Science and UMBC's M.S. in Applied Data Science programs aim to equip students with essential data science skills, they diverge significantly in focus and structure. CTU's program integrates business management with analytics, providing a holistic view suitable for managerial roles that require data-driven decision-making. CTU's program is 100% online. In contrast, UMBC's program delves deeply into technical aspects of data science, preparing students for specialized roles in data science and analytics with a strong foundation in machine learning, big data, and data ethics with different instructional modalities per course in order to suit a student's requirements: in-person, hybrid or online.

In short, CTU's program has a stronger focus on business applications, and they offer 100% of their courses online. The UMBC's proposed program has a stronger focus on data science theory and practice with different instructional modalities per course to suit a student's requirements: in-person, hybrid, or online.

Frostburg State University (FSU)

FSU offers an M.S. in Applied Computer Science with a Database Concentration.

FSU M.S. in Applied Computer Science with Database Concentration vs UMBC M.S. in Applied Data Science

FSU Core Courses	FSU Electives
COSC610 - Advanced Data Structures and Algorithms COSC625 - Advanced Software Engineering COSC630 - Web Development and Programming I COSC631 - Web Development and Programming II COSC640 - Database Systems I COSC641 - Database Systems II COSC645 - Data Mining COSC646 - Data Cloud COSC647 - Information Assurance	COSC591 - Seminar in Computer Science COSC594 - Field Experience in Computer Science COSC599 - Individual Problems in Computer Science COSC602 - Advanced Programming Concepts COSC690 - Special Topics in Database Systems COSC691 - Special Topics in Data Analytic Instruments COSC700 - Master Research Paper or Project

Frostburg State University's Master of Science in Applied Computer Science with its database concentration provides a robust foundation in database systems, data mining, and data warehousing, preparing students for roles focused on database administration and management. The general concentration offers a broad exposure to computer networking, software engineering, and artificial intelligence, equipping graduates for diverse technical

and managerial positions across various sectors. In contrast, UMBC's M.S. in Applied Data Science program emphasizes foundational skills in data science, including data analysis, machine learning, and big data platforms, with specialized courses in ethics, leadership, and advanced topics like deep learning and natural language processing. UMBC's program is tailored for those seeking expertise in data-driven decision-making and advanced analytics applications across industries. The programs cater to different career paths: Frostburg emphasizes applied computer science with a concentration choice, while UMBC focuses on comprehensive data science skills essential for contemporary data-centric roles.

In short, FSU's M.S. in Applied Computer Science program goes in depth about the theory and practice of computer science in general with their specialization focusing on databases and data mining. In this regard as well, our proposed program is data science centric (focusing more on application than theory) with a wider range of data-centric electives and core courses.

Johns Hopkins University (JHU)

JHU offers two data science degrees: an online MS in Data Science and in-person MSE in Data Science.

JHU's online MS in Data Science vs. UMBC's M.S. in Applied Data Science

JHU offers an online MS in Data Science degree. The program is designed for working professionals, offering flexibility with asynchronous and synchronous online courses. The program focuses on practical skills and theoretical knowledge in applied mathematics and computer science. Courses are taught by senior-level engineers and data scientists with practical experience.

Curriculum:

- **Foundation Courses:** Statistical Methods and Data Analysis, Algorithms for Data Science.
- **Required Courses:** Introduction to Optimization or Computational Statistics, Statistical Models and Regression, Data Science, Data Engineering Principles and Practice, Data Patterns and Representations.
- **Electives:**
  - **Applied and Computational Mathematics Electives:** Includes Real Analysis, Matrix Theory, Computational Methods, Discrete Hybrid Optimization, and others.
  - **Computer Science Electives:** Large-Scale Database Systems, Deep Neural Networks, Advanced Machine Learning, and more.
- **Specialization:** Flexibility to choose electives based on interests and career goals.

It is evident that the online MS in Data Science at Johns Hopkins is highly flexible, designed for working professionals. It emphasizes both theoretical and practical aspects of data science, offering a wide range of electives in applied mathematics and computer science. UMBC's M.S. in Applied Data Science combines theoretical knowledge with practical applications. It features a comprehensive curriculum with core courses and electives, and opportunities for hands-on experience through capstone projects or research. Both programs offer robust training in data science. JHU's program is more appealing for those needing maximum flexibility and a strong online component, while UMBC's program offers a traditional approach with a mix of online and on-campus courses, catering to those interested in domain-specific applications.

JHU's MSE in Data Science vs. UMBC's M.S. in Applied Data Science

The Data Science Master's program at the Johns Hopkins University is a fully residential program which provides

the training in applied mathematics, statistics and computer science to serve as the basis for an understanding, and appreciation, of existing data science tools. Their program aims to produce the next generation of leaders in data science by emphasizing mastery of the skills needed to translate real-world data-driven problems in mathematical ones, and then solving these problems by using a diverse collection of scientific tools.

Similarities between the JHU's MSE in Data Science and UMBC's M.S. in Applied Data Science programs

1. Core Curriculum: Both programs offer core courses that cover fundamental data science topics such as machine learning, data analysis, data management, and big data processing.
2. Capstone Projects: Both programs include a capstone project that allows students to apply their knowledge to real-world data science problems.
3. Ethics and Legal Issues: Both programs emphasize the importance of understanding ethical and legal issues in data science.

Differences:

1. Program Structure:

i. JHU offers a traditional M.S.E. in Data Science with a focus on a comprehensive list of approved courses primarily from the Department of Applied Mathematics and Statistics.

ii. UMBC proposes to offer a M.S. in Applied Data Science with flexible pathways tailored to specific industries such as cybersecurity, healthcare analytics, and economics.

2. Leadership Training:

i. UMBC includes a specific course on leadership in data science.

ii. JHU does not explicitly list a leadership course in their approved courses.

The JHU's target audience is students with a strong foundation in mathematics and computer science who are interested in a career in data science research or academia, while UMBC's target audience is students with a variety of backgrounds who are interested in a career in data science. The UMBC's program is particularly well-suited for working professionals who want to develop new skills or change careers.

Loyola University Maryland

Loyola University Maryland offers an online MS in data science degree

Similar Courses: Both programs cover fundamental topics in data science, including:

- Introduction to Data Science
- Data Management
- Machine Learning
- Ethical and Legal Issues in Data Science

Different Courses:

- Loyola offers courses such as Data Visualization, Database Systems, and Statistical Analysis.
- UMBC offers courses on Platforms for Big Data Processing, Leadership in Data Science, and specialized pathways like Cybersecurity, Healthcare Analytics, and Management Sciences.

Loyola's program is entirely online (and primarily asynchronous), while UMBC's proposed program offers a variety of delivery options, including on-campus, hybrid, and online (primarily synchronous) courses.

Maryland Institute College of Art (MICA)

MICA offers an MPS in Data Analytics and Visualization.

Similarities:

- Both programs cover essential topics in data science such as data analysis, machine learning, data management, and ethical/legal issues. They also emphasize hands-on experience with real data and practical applications of data science principles.

Differences:

- MICA focuses on data visualization, critical thinking, and design principles. Core courses include Data Visualization, Critical Thinking, Data Analytics, Data Management, and a Capstone Project.
- UMBC offers a broader selection of courses and pathways, including big data processing, data platforms, leadership, and specialized tracks like Cybersecurity, Healthcare Analytics, and Bioinformatics.

  Teaching and Audience:
- MICA targets students interested in integrating data science with creative design and visualization. UMBC aims at a diverse range of students from various fields, with pathways tailored to industry-specific applications.

The MPS in Data Analytics and Visualization program that MICA offers focuses heavily on data visualization. In contrast, the program from UMBC will cover the various aspects of applied data science beyond visualization.

McDaniel College

McDaniel College offers an M.S. in data analytics. Core courses include

- ANA 500 - Foundations of Data Analytics
- ANA 505 - Data Mining: Algorithms and Applications
- ANA 510 - Statistical Modeling
- ANA 515 - Data Preparation
- ANA 522 - Fundamentals of Programming in Python
- ANA 525 - Qualitative Methods
- ANA 530 - Quantitative Reporting and Modeling
- ANA 535 - Forecasting
- ANA 540 - Applied Machine Learning

McDaniel College's program is tailored for those seeking a comprehensive foundation in data analytics with a focus on practical applications and business intelligence. UMBC's program is designed for a broader audience with a focus on preparing students from diverse backgrounds for various specialized fields within data science and offers more pathways and interdisciplinary collaboration.

The data science program that McDaniel College has is either fully online or Hybrid (low residency), where students need to attend 3 days a semester. Our M.S. in Applied Data Science will offer online, hybrid, and in-person classes, allowing more flexibility than McDaniel's low-residency hybrid program.

Morgan State University (MSU)

MSU offers a graduate degree program leading toward an M.S. in data analytics and visualization.

Teaching Mode: MSU's M.S. in Data Analytics and Visualization program is currently offered on campus. They plan to add an online option later. UMBC students can take courses both online and on campus.

Core Courses: MSU's data science program, created within the Information Science & Systems department, offers core courses in data wrangling and visualization. Students can choose to focus on statistical data analytics or machine learning. However, UMBC's data science program, created by the Computer Science Department, emphasizes machine learning, exploratory data analysis, big data, and data management.
Electives: MSU offers 7 tracks, and students have to choose 3 courses from one track only. However, UMBC students can choose courses from 10 different tracks, and there is no requirement to stick with the same track.

In short, the Morgan State program has a stronger focus on data visualization, while UMBC's proposed program has a more general focus on data science. This is reflected in the course requirements for each program. The MSU program is structured differently than the UMBC program with regard to completion time (1 year versus 2 years at an average, respectively).

Notre Dame of Maryland University (NDMU)

NDMU offers an online MS in Analytics degree. Core courses include

- CST-530 Foundations of Analytics
- CST-531 Data Design and Management
- CST-532 Data Tools
- CST-540 Data Visualization
- CST-550 Project Management
- CST-610 Critical Inquiry
- CST-611 Data Security
- CST-620 Data Mining and Warehousing
- MAT-575 Applied Statistics
- MAT-576 Data and Decision Modeling

Similar Courses:

- Both programs cover foundational analytics, data management, and data visualization.
- Applied statistics and data mining are common topics.

Different Courses:

- NDMU includes courses in project management, critical inquiry, and data security.
- UMBC might offer more advanced machine learning, AI, and big data courses.

Teaching Style and Audience:

- NDMU offers its program online, targeting professionals needing flexible learning schedules.
- UMBC offers a mix of in-person and online options, focusing on both full-time students and working professionals.

Summary: The MS in analytics that Notre Dame offers is a completely online degree, whereas our M.S. in Applied Data Science would have different modalities of instruction: in-person, hybrid and online. Their degree requires students to only take 2 are electives (which students can only take from their business/economics program). None of the required courses appears to have a program specific course prefix. In this context, our program will have a majority of courses bearing our program's prefix (and are not cross listed with any other program's courses) and offer electives from a wider array of subjects across other fields relevant to data science.

Towson University

Towson University offers an M.S. in computer science with a track in data science. Core courses include

- COSC 519 Operating Systems Principles

- COSC 578 Database Management Systems
- COSC 600 Advanced Structures and Algorithm Analysis
- COSC 612 Software Engineering
- COSC 650 Computer Networks
- COSC 757 Data Mining
- Either COSC 880 COSC Project or COSC 897/COSC 898 Computer Science Thesis

Similar Courses

- COSC 578 Database Management Systems vs. DATA 604
- COSC 757 Data Mining vs DATA 602
- COSC 880 COSC Project vs DATA 606

As a broad-based computer science degree, the only significant curricular exposure to data science in Towson's program are at least 3 data science-related courses in the degree's specialty track in data science plus a student's thesis or project. By contrast, UMBC's proposed M.S. in Applied Data Science curriculum is entirely focused on data science topics, to include courses on non-technical topics such as leadership and laws/policies which give students with non-technical backgrounds an opportunity to advance their data science knowledge.

University of Maryland, College Park

The University of Maryland, College Park (UMCP) offers two graduate degrees: MS in Business Analytics and MS in Data Science (formerly MPS in Data Science and Analytics).

UMCP's MS in Business Analytics vs UMBC's M.S. in Applied Data Science Programs

Core Courses	Electives
BUDT730 Data, Models and Decisions BUDT703 Database Management Systems BUDT704 Data Processing and Analytics in Python BUDT737 Big Data and Artificial Intelligence for Business BUDT758T Data Mining and Predictive Analytics BUDT785D Data Visualization and Web Analytics	BUDT758V Operations Analytics (2 credits) BUDT758Z Computer Simulation for Business Applications (2 credits) BUDT758L Price Optimization and Revenue Management BUSI751 Decision Analytics (2 credits) BUDT758W Capstone Project in Business Analytics BUDT758A Business Communication (1 credit)

The MS in Business Analytics program at the UMCP offers a robust curriculum focusing on practical applications of data analysis and decision-making in business contexts. Courses like BUDT730 emphasize modeling and decision theory, complemented by hands-on training in Python-based analytics (BUDT704) and AI applications in business (BUDT737). Data visualization and web analytics (BUDT785D) further enhance skills crucial for interpreting and presenting data-driven insights. In contrast, UMBC's M.S. in Applied Data Science program provides a comprehensive foundation in foundational data science principles through courses such as DATA 601 and 602, emphasizing statistical analysis and machine learning. The program also delves into big data processing platforms (DATA 603) and includes a capstone project (DATA 606) to apply learned skills in real-world scenarios. Both programs offer strong technical training with UMCP focusing more on business applications while UMBC provides a broader base in data science

fundamentals and technologies.

In short, the UMCP's MS in business analytics is designed for students with a business background who want to develop their data analytics skills. The UMBC proposed M.S. in Applied Data Science is designed for students from a variety of backgrounds who want to pursue a career in data science. The UMCP's MS in business analytics program focuses on business concepts and applications. The UMBC's proposed M.S. in Applied Data Science is a more applied program, with a focus on developing the technical skills needed for data science jobs.

UMCP's MS in Data Science vs UMBC's M.S. in Applied Data Science Programs

UMCP MS in Data Science Courses	UMBC M.S. in Applied Data Science Courses
DATA601: Probability and Statistics	DATA608: Probability and Statistics for Data Science
DATA602: Principles of Data Science	DATA601: Introduction to Data Science
DATA603: Principles of Machine Learning	DATA602: Introduction to Data Analysis and Machine Learning
DATA604: Data Representation and Modeling	DATA604: Data Management
DATA605: Big Data Systems	DATA603: Platforms for Big Data Processing
DATA699: Capstone Research Project	DATA606: Data Science Project
DATA612: Deep Learning	DATA 621: Practical Deep Learning
DATA641: Natural Language Processing	DATA 622: Applications of Natural Language Processing

* Courses in blue are elective courses.

Similarities:

1. Core Courses: Both programs cover fundamental topics like data management, machine learning, data analysis, and big data processing.
2. Capstone Projects: Both programs include a capstone project where students apply their skills to real-world problems.

Differences:

1. Course Offerings:

i. UMCP includes courses like Scientific Computing, Statistical Methods, and Visualization and Presentation.

ii. UMBC includes courses such as Platforms for Big Data Processing, Ethical and Legal Issues in Data Science, and domain-specific pathways (e.g., cybersecurity, healthcare analytics).

2. Target Audience:

i. UMCP's program is geared towards students seeking a blend of theory and practice with a stronger emphasis on scientific research.

ii. UMBC's program is aimed at professionals looking to advance their careers with practical and leadership skills in data science.

3. Teaching Methods:

i. UMCP is more research-oriented, with a focus on computational and statistical methods.

ii. UMBC focuses on applied skills and practical knowledge that are suitable for working professionals.

As discussed above, UMCP's MS in Data Science and UMBC's proposed M.S. in Applied Data Science programs are similar to each other. By having campuses at different locations, UMBC targets a different set of students geographically.

University of Maryland Eastern Shore (UMES)

UMES offers an M.S in Data Science and Analytics Engineering degree.

Teaching Mode: UMES' Master's in Data Science and Analytics Engineering program is online. UMBC students can take their courses both online and on campus.

Core Courses: The core courses of the UMES data science program focus on statistical data analysis, whereas the emphasis at UMBC is machine learning, exploratory data analysis, big data, and data management.

Electives: UMES offers 11 elective courses, each focusing on different application areas of data science, such as cyber security, geospatial analysis, business analytics, robotics, and even tourism. UMBC offers four or more elective courses developed and taught by 11 different programs/departments.

Thesis: UMBC doesn't offer a thesis option, whereas the students at UMES can work on their thesis.

The M.S. in Data Science and Analytics Engineering that UMES offers is in a different geographical location and best suited to serve the needs of Maryland's population in the Delmarva peninsula whereas UMBC is better suited for students residing in the greater Baltimore metropolitan region.

University of Maryland, Global Campus (UMGC)

The UMGC offers an online Master of Science in data analytics. Core courses and electives are listed in the following table.

Core Courses Decision Analytics (DATA 605) AI Ethics (DATA 615) Data Visualization (DATA 625) Data Management (DATA 635) Machine Learning (DATA 645) Data Analytics Capstone (DATA 690)	**Pathway-1: AI/Machine Learning** Deep Learning and Neural Networks (DATA 655) Advanced Topics in Data Science (DATA 660) AI Applications (DATA 665) Specialization Project (DATA 675) Workplace Learning in Data Analytics (DATA 686)
Pathway-2: Marketing Marketing Management (MRKT 600) Consumer Behavior and Customer Relationship Management (MRKT 602) Brand Management and Integrated Marketing Communication (MRKT 603) International Marketing Management (MRKT 605)	**Pathway-3: Cybersecurity Management & Policy** Foundations of Cybersecurity Management (CMAP 605) Cybersecurity Defense Strategies (CMAP 615) Cybersecurity Risk Management (CMAP 625) Cybersecurity Governance (CMAP 635)
Pathway-4: Cybersecurity Technology Introduction to Cybersecurity (CTCH 605) Cybersecurity Threats and Analysis (CTCH 615) Cybersecurity for Systems and Networks (CTCH 625) Cybersecurity Attack Prevention Strategies (CTCH 635)	**Pathway-5: Digital Forensics & Cyber Investigation** Digital Forensics and Cyber Investigation Foundations (DFCS 605) Collection and Examination of Digital Evidence (DFCS 615) Windows Forensics and Security (DFCS 625) Linux Forensics and Security (DFCS 635)

The Master of Science in Data Analytics program at the University of Maryland Global Campus (UMGC) focuses on a comprehensive curriculum designed to equip students with essential skills in decision analytics, AI ethics, data visualization, data management, machine learning, and culminates in a data analytics capstone project. This program emphasizes practical applications of analytics across various domains. In contrast, the M.S. in Applied Data Science program at UMBC offers a rigorous foundation in data science through courses such as introduction to data science, data analysis and machine learning, big data processing platforms, data management, probability and statistics, and concludes with a capstone project. UMBC's program emphasizes both theoretical understanding and hands-on experience with data analysis and processing technologies. Both programs provide strong foundations in data-related disciplines but in terms of electives and pathways, UMBC offers more possibilities than UMGC, e.g. health IT, econometrics, policy analysis, aging studies, advanced computing, and project management. UMGC's program is online only, whereas UMBC's proposed M.S. in Applied Data Science program will be offered in-person and hybrid modalities, is a selective-admission program, and does not specifically target distance-learning markets.

Appendix 3

M.S. in Applied Data Science Degree Requirements

The required core curriculum of the M.S. in Applied Data Science (18 credits) is as follows:

- DATA 601 Introduction to Data Science
- DATA 602 Introduction to Data Analysis and Machine Learning
- DATA 603 Platforms for Big Data Processing
- DATA 604 Data Management
- DATA 608 Probability and Statistics for Data Science
- DATA 606 Capstone Project in Data Science

Students must take four 3-credit electives (12 credits) from the DATA program or the 10 pathways with the approval of their advisor. The UMBC Graduate Catalog provides information and descriptions for those courses.

Below is a *sample* listing of regularly recurring elective courses from the DATA program:

- DATA 605 Ethics and Privacy in Data Science
- DATA 607 Leadership in Data Science
- DATA 611 Essential Mathematics for Machine Learning: An Applied Guide
- DATA 613 Data Visualization and Communication
- DATA 621 Practical Deep Learning
- DATA 623 Hands-on Generative AI
- DATA 624 Data Science for Finance

For increased curriculum flexibility, there is no set sequence of required courses, except that the project (DATA 606) generally is taken after the other core courses have been completed successfully and that newly-admitted students to the data science program are recommended to start with DATA 601 in their first semester. Additionally, prospective students holding certain current industry certifications may, upon proper documentation, request DATA 601 to be waived, and that another course be used to satisfy that credit requirement (usually a fifth elective.)

<u>Pathways</u>

For their electives students may also choose courses from any of the identified pathways. Listed below are a sampling of courses from each pathway.

Advanced Computing and Analytics

- CMSC 615 Introduction to Systems Engineering
- CMSC 625 Modeling and Simulation of Computer Systems
- CMSC 627 Wearable Computing
- CMSC 628 Mobile Computing
- CMSC 636 Data Visualization
- CMSC 653 Information and Coding Theory
- CMSC 655 Numerical Computations
- CMSC 661 Principles of Database Systems
- CMSC 668 Service-Oriented Computing
- CMSC 671 Principles of Artificial Intelligence
- CMSC 673 Introduction to Natural Language Processing
- CMSC 675 Introduction to Neural Networks
- CMSC 676 Information Retrieval

- CMSC 678 Machine Learning

Clinical Informatics (with UMB)

- INFO 601: Foundations in Clinical and Health Informatics
- INFO 602: Clinical Information Systems
- INFO 604: Decision Support Systems in Healthcare

Cybersecurity

- CYBR 620 Introduction to Cybersecurity
- CYBR 650: Managing Cybersecurity Operations
- CYBR 658: Risk Analysis and Compliance

Data Science Analysis

- IS 661 – Biomedical Informatics Applications
- IS 706 – Interfaces For Info. Visualization & Retrieval
- IS 707 – Applications of Intelligent Technologies
- IS 721 – Semi-Structured Data Management
- IS 722 – Systems and Information Integration
- IS 728 – Online Communities
- IS 731 – Electronic Commerce
- IS 733 – Data Mining
- IS 777 – Data Analytics for Statistical Learning

Economics/Econometrics

- PUBL 604 – Statistical Analysis
- ECON 601 – Microeconomic Analysis
- ECON 602 – Macroeconomic Analysis
- ECON 611 – Advanced Econometric Analysis I
- ECON 612 – Advanced Econometric Analysis II
- ECON 652 – Economics of Health

Healthcare Analytics

- HIT658: Health Informatics I
- HIT759: Health Informatics II
- HIT723: Public Health Informatics
- HIT674: Process and Quality Improvement within Health IT
- HIT751: Introduction to Healthcare Databases

Management Sciences

- ENMG 650: Project Management Fundamentals
- ENMG 654: Leading Teams and Organizations
- ENMG 658: Financial Management
- ENMG 659: Strategic Management
- ENMG 660: Systems Engineering Principles
- ENMG 661: Leading Global Virtual Teams
- ENMG 663: Advanced Project Management Applications
- ENMG 664: Quality Engineering & Management
- ENMG 668: Project and Systems Engineering Management

- ENMG 690: Innovation and Technology Entrepreneurship

Policy Analysis

- ECON 600 Policy Consequences of Economic Analysis
- PUBL 601 Political and Social Context of the Policymaking Process
- PUBL 603 Theory and Practice of Policy Analysis
- PUBL 607 Statistical Applications in Evaluation Research
- PUBL 608 Applied Multivariate Regression Analysis

Project Management

- ENMG 650: Project Management
- ENMG 661: Leading Virtual/Global Teams
- ENMG 663: Advanced Project Management Applications

Appendix 4
Learning Outcomes & Assessments, M.S. in Applied Data Science

(SLO-1) Students will develop the ability to use programming languages and tools to collect, clean, and analyze data.

MEASURE: Students will be given program assignments and projects that require them to use programming languages and tools to collect, clean, and analyze data. As appropriate, each course will assess students based on exams, individual or group projects, presentations, papers, lab exercises, and/or case studies.

CRITERION: Successful completion of each course with a B or better grade. The individual faculty member and/or the Data Science Graduate Program Director (DS GPD) will meet with students not meeting this criterion to help improve their performance or determine their continued enrollment in the program. The DS GPD reviews syllabi at least annually to ensure relevancy, currency, and pedagogical appropriateness.

ASSESSMENT: Each semester starting in Fall 2026 or upon program launch.

(SLO-2) Students will learn how to use statistical and machine learning techniques to extract insights from data.

MEASURE: Homework assignments will be designed to require students to apply statistical and machine learning techniques to real-world data sets. As appropriate, each course will assess students based on exams, individual or group projects, papers, lab exercises, and/or case studies.

CRITERION: Successful completion with a B or better grade. The individual faculty member and/or the DS GPD will meet with students not meeting this criterion to help improve their performance or determine their continued enrollment in the program. The DS GPD reviews syllabi at least annually to ensure relevancy, currency, and pedagogical appropriateness.

ASSESSMENT: Each semester starting in Fall 2026 or upon program launch.

(SLO-3) Students will learn how to create and interpret data visualizations to communicate their findings to others.

MEASURE: Students will be asked to create and interpret data visualizations as part of their coursework assignments. As appropriate, each course will assess students based on exams, individual or group projects, presentations, papers, literature reviews, and/or case studies. Students will also review each other's data visualizations and provide feedback. This will help students to identify areas where they can improve their skills.

CRITERION: Successful completion with a B or better grade. The individual faculty member and/or the DS GPD will meet with students not meeting this criterion to help improve their performance or determine their continued enrollment in the program. The DS GPD reviews syllabi at least annually to ensure relevancy, currency, and pedagogical appropriateness.

ASSESSMENT: Each semester starting in Fall 2026 or upon program launch.

(SLO-4) Students will demonstrate the ability to conduct scholarly and/or professional-level research and the various skills necessary in the data science profession such as team collaboration, critical thinking, time management, and effective communication.

MEASURE: Students will be assessed on their ability to develop and present scholarly or professional-grade written and oral deliverables such as analysis papers, presentations, and their capstone project. To meet these goals they will be expected to demonstrate effective organizational, time management, communication, critical thinking, and other such skills that contribute to an effective data science practitioner in the workplace. As appropriate, each course will assess students based on exams, individual or group projects, presentations, papers, literature reviews, and/or case studies.

CRITERION: Successful completion with a B or better grade. The individual faculty member and/or the GPD will meet with students not meeting this criterion to help improve their performance or determine their continued enrollment in the program. The GPD reviews syllabi at least annually to ensure relevancy, currency, and pedagogical appropriateness.

ASSESSMENT: Each semester starting in Fall 2026 or upon program launch.

Appendix 5
Student Support

The M.S. in Applied Data Science graduate program director and data science-affiliated full-time faculty members are responsible for advising. Other faculty involved with courses and specialization may also advise students and/or participate on capstone project committees. The DPS supports the CSEE department for program administrative support, recruitment, and marketing operations. Students in this program will have access to UMBC's wide range of support resources, such as the DOIT, Career Services, Off-Campus Student Services, Division of Institutional Equity, and the Graduate Student Association, among many others. Depending on the program's demands, DPS may allocate additional staff and resources to assist as necessary, such as those on the Office of Professional Programs Student Success team. UMBC students and faculty use Blackboard as the official campus Learning Management System for coursework and administration to support lecture, hybrid, and online learning modalities.

Students will be expected to have ready access to computers and the internet, with guidance on minimum technical requirements posted publicly on the program's website. Outside of lecture or in-person meetings, students and faculty will be expected to communicate through email, Blackboard, and UMBC's other collaborative platforms such as MyUMBC or Google Documents. Official information about curriculum updates, new courses, internships, graduation deadlines, etc., are conveyed to students via the student email list as the program's official distribution medium and/or directly to the students who are on email lists maintained by UMBC's Graduate School (for graduations and academic affairs), Registrar (for scheduling), Student Business Services (for costs and financial aid), or other campus entities. Technical support for UMBC's platforms, such as email and Blackboard, is provided by UMBC's DOIT upon request to the Help Desk Request Tracker. Information of interest to students, ranging from program and course information, academic expectations, tuition and fees, graduation requirements, and more, are located on UMBC's various public websites.

As of 2022, the only financial aid opportunities for this self-supported program are offered by the US government and are open to US citizens only. Information can be found online on our website[14]. Students seeking additional funding or employment to support their studies are encouraged to work with the Career Center to identify relevant opportunities.

UMBC's Office of Accessibility & Disability Services (ADS) under the Division of Academic Affairs ensures that students with disabilities are afforded an equal opportunity to participate in and benefit from the programs, services, and activities of the University through the provision of accommodations and reasonable modifications that result in equal access and full inclusion, which reflects UMBC's commitment to fostering an accessible and inclusive environment for all members of the UMBC community. Assistance from the ADS team is available to all UMBC students regardless of learning modality or campus location.

UMBC's Office of Equity and Inclusion has primary responsibility for managing UMBC's efforts related to Title IX as well as other civil rights issues, including discrimination, harassment, hate and bias. All faculty are considered 'responsible parties' regarding reporting requirements pursuant to UMBC's Title IX policies.

[14] https://professionalprograms.umbc.edu/scholarships-funding/

Appendix 6
Student Competencies Assessment

This appendix describes the quantitative and qualitative ways that M.S. in Applied Data Science students will be assessed in their courses, which are aligned with the program objectives described earlier.

Quantitative assessment

- Maintenance of a 'B' or better cumulative GPA.
- Quizzes, mid-term, and/or final examinations as appropriate.
- Practical examinations to evaluate competency with data science tools and techniques.
- Written project analyses and/or case studies.
- Written assignments, including in-class writing assignments and research papers that require students to conduct independent or team-based research and analysis to produce deliverables supporting course objectives
- Oral assignments that include both presentation of individual or group work and critiquing the work of others.
- Experiential learning opportunities as offered through faculty-led research opportunities, internships, field experiences, independent studies, among other opportunities.
- Capstone course.
- Other assessment mechanisms that may become relevant or required by the data science industry.

Qualitative assessment

- Academic advising at the program level to ensure students maintain academic and program expectations to proactively head off potential obstacles to success.
- Individual, peer-group, and/or in-class critiques of student work.
- Direct engagement between faculty and students in classroom, lab, or online platforms.
- Capstone courses (DATA 606) where students conduct a structured independent research effort to develop a scholarly or professional paper demonstrating their critical thinking skills, analytical capabilities, and/or accumulated technical expertise as a data science practitioner.

Appendix 7

M.S. in Applied Data Science Course Names and Descriptions (Core Courses and Program-Owned Electives)

DATA 601: Introduction to Data Science (3 cr.)

The goal of this class is to give students an introduction to and hands on experience with all phases of the data science process using real data and modern tools. Topics that will be covered include data formats, loading, and cleaning; data storage in relational and non-relational stores; data governance, data analysis using supervised and unsupervised learning using R and similar tools, and sound evaluation methods; and data visualization.

DATA 602: Introduction to Data Analysis and Machine Learning (3 cr.)

This course provides a broad introduction to the practical side of machine-learning and data analysis. This course examines the end-to-end processing pipeline for extracting and identifying useful features that best represent data, a few of the most important machine algorithms, and evaluating their performance for modeling data. Topics covered include decision trees, logistic regression, linear discriminant analysis, linear and non-linear regression, basic functions, support vector machines, neural networks, Bayesian networks, bias/variance theory, ensemble methods, clustering, evaluation methodologies, and experiment design.

DATA 603: Platforms for Big Data Processing (3 cr.)

The goal of this course is to introduce methods, technologies, and computing platforms for performing data analysis at scale. Topics include the theory and techniques for data acquisition, cleansing, aggregation, management of large heterogeneous data collections, processing, information and knowledge extraction. Students are introduced to map-reduce, streaming, and external memory algorithms and their implementations using Hadoop and its eco-system (HBase, Hive, Pig, and Spark). Students will gain practical experience in analyzing large existing databases.

DATA 604: Data Management (3 cr.)

This course introduces students to the data management, storage and manipulation tools common in data science. Students will get an overview of relational database management systems and various NoSQL database technologies, and apply them to real scenarios. Topics include: ER and relational data models, storage and concurrency preliminaries, relational databases and SQL queries, NoSQL databases, and Data Governance.

DATA 605: Ethical and Legal Issues in Data Science (3 cr.)

This course provides a comprehensive overview of important legal and ethical issues pertaining to the full life cycle of data science. The student learns how to think through the ethics of making decisions and inferences based on data and how important cases and laws have shaped the data science field. Students will use real and hypothetical case studies across various domains to explore these issues.

DATA 606: Data Science Project (3 cr.)

This is a semi-independent course that provides the advanced graduate student in the Data Science program the opportunity to apply the knowledge, skills and tools they've learned to a real-world data science project. Students will work with a real data set and go through the entire process of solving a real-world data science project. The project may be conducted with industry, government and academic partners, who can provide the data set, with guidance and feedback from the instructor.

DATA 607 Leadership in Data Science (3 cr.)

Course Description: In the rapidly evolving field of data science, technical expertise alone is not sufficient for success. Effective leadership is essential to navigate the complexities of data-driven decision-making and drive

impactful outcomes. The course is designed as a practical stage-by-stage field guide for our students to their careers in data science. It provides valuable insights and strategies for individuals at different career stages, from aspiring data science tech leads to seasoned data science executives. Through a comprehensive examination of several case studies, students will develop a deep understanding of the leadership skills, capabilities, and virtues necessary for success in the field of data science.

DATA 608 Probability and Statistics for Data Science (3 cr.)

Course Description: Data science relies heavily on the principles of probability theory and inferential statistics for extracting meaningful insight from complex datasets. DATA 608 introduces students to the essential concepts and tools of probability theory and statistics that form the backbone of data-driven decision-making processes. The course emphasizes a combination of theoretical tools, and application-oriented analysis to enable students to utilize statistical methods effectively in real-world data science scenarios.

This course consists of two major parts. In the first part, the key concepts of probability theory such as the probability space, different distribution functions, probability mass functions and densities, random variables, variance and covariance, expectation values and moments, conditional probability, independence, Bayes formula, laws of large numbers, and the central limit theorem are introduced. In the second part of the course, the basic concepts of statistical inference are covered. Among the covered topics, sampling methods, confidence intervals, hypothesis testing, and (one-way and two-way) ANOVA are discussed.

DATA 611 Essential Mathematics for Machine Learning: An Applied Guide (3 cr.)

Course Description: This course aims to provide fundamental yet necessary mathematics for graduate students to better understand machine learning methods and algorithms. Fundamental concepts of linear algebra, analytic geometry, matrix decompositions, vector calculus, and optimization are taught with Python.

DATA 613 Data Visualization and Communication (3 cr.)

Course Description: Data visualization is a critical skill in the modern era, enabling professionals to transform complex data into actionable insights. In DATA 613 Data Visualization and Communication, students will embark on a journey to master the art and science of visualizing data effectively. This graduate-level course equips students with the knowledge and skills necessary to create compelling data visualizations and communicate their findings to diverse audiences.

DATA 621 Practical Deep Learning (3 cr.)

Course Description: This course reviews modern methods used in deep learning and neural network design. The material focuses on a broad set of techniques that are commonly used in state-of-the-art neural network architectures. It includes methods used broadly, as well as network styles prevalent in specific sub-domains like computer vision, natural language processing, and social network analysis. The course does not review derivations of algorithms, but it explains methods with (somewhat gentle) math.

DATA 623 Hands-On Generative AI (3 cr.)

Course Description: This course introduces Generative AI (GenAI) by focusing on practical applications and hands-on experience with cutting-edge GenAI models. Students will learn to implement and apply GenAI models to generate text, images, music, and videos while addressing the ethical challenges inherent in GenAI.

DATA 624 Data Science for Finance (3 cr.)

Course Description: The aim of the course is to introduce and apply data science tools to model financial phenomena. This course is a first step towards better understanding financial issues with the help of data science.

The topics to be covered are accessing financial data via APIs, regression analysis for finance, time series analysis, net present value, simulation, and modern portfolio theory.

DATA 696 – Independent Study for Interns and Co-op Students (1-3 cr.)

Description: Supervision of student internship/co-op activities in the data science discipline. A short technical report that describes the activities conducted relevant to theoretical or operational concepts learned in other coursework and lessons gained through the internship/co-op experience is required at the end of the course. The course grade will be based on the technical report. The report will be submitted to the student's Graduate Program Director by the last day of the semester.

DATA 699 – Independent Study in Data Science (1-3 cr.)

Description: Individualized research activities under faculty supervision related to data science.

Appendix 8

Full-time Faculty Supporting the M.S. in Applied Data Science program

The CSEE faculty listed below supporting the M.S. in Applied Data Science are full-time regular faculty with data science expertise. Specific course/teaching assignments typically change on a regular basis. Additional faculty, including full-time, part-time, and/or adjuncts, may be included in the future to support instructional activities as needed.

Table 4: List of the names, ranks, and status of the CSEE faculty members and the courses they can teach in the proposed program.

Name	Highest Degree Earned, Field, Institution	Rank	Status	Course(s)
Anupam Joshi	Ph.D., Computer Science, Purdue University	Professor	Full-time	DATA 607
Ergun Simsek	Ph.D., Electrical and Computer Engineering, Duke University	Assistant Professor	Full-time	DATA 601 DATA 606
Masoud Soroush	Ph.D., Computational Physics, Stanford University	Lecturer	Full-time	DATA 602 DATA 608
Ajinkya Borle	Ph.D., Computer Science, UMBC	Lecturer	Full-time	DATA 601 DATA 604
M. Ali Yousuf	Ph.D., Physics, Quaid-e-Azam University	Lecturer	Full-time	DATA 603 DATA 623
Frank Ferraro	Ph.D., Computer Science, Johns Hopkins University	Assistant Professor	Full-time	DATA 602 DATA 621
Tim Finin	Ph.D., Computer Science, Illinois Urbana-Champaign	Professor	Full-time	DATA 601 DATA 602
Rebecca Williams	Ph.D., Engineering Science, Dartmouth College	Assistant Professor	Full-time	DATA 613 DATA 623
Don Engel	PhD., Physics, University of Pennsylvania	Assistant Professor	Full-time	DATA 613
Manas Gaur	Ph.D., Artificial Intelligence, University of South Carolina	Assistant Professor	Full-time	DATA 621
Cynthia Matuszek	Ph.D., Computer Science, University of Washington	Associate Professor	Full-time	DATA 623 DATA 605
Tim Oates	Ph.D., Computer Science, University of Massachusetts	Professor	Full-time	DATA 602
Roberto Yus	Ph.D., Computer Science, University of Zaragoza	Assistant Professor	Full-time	DATA 605
Zeynep Kacar	Ph.D. Biostatistics, University of Maryland, College Park	Lecturer	Full-time	DATA 608 DATA 624

Appendix 9
Degree Path

There is no required path toward degree completion and students generally may take courses in any order. Most students are encouraged to start with DATA 601 (Introduction to Data Science), especially if they are new to the discipline. Other courses may be taken in any order except that the capstone project (DATA 606) is usually taken after completing the core courses – most often during a student's final semester.

There are no academic or knowledge prerequisites for the core courses required for degree completion. However, certain specialized electives may have academic, professional, or knowledge prerequisites, such as DATA 621 (Practical Deep Learning) or DATA 623 (Hands-on Generative AI). For highly specialized electives, students lacking the appropriate background are encouraged to speak with their respective program director and/or the course instructor before registering to determine their ability to complete such courses successfully.

Appendix 10

Table 5: Resources and Narrative Rationale

	Year 1	Year 2	Year 3	Year 4	Year 5
1. Reallocated funds	0	0	0	0	0
2. Tuition/fee Revenue (c + g below)	3877826.4	3991451.39	4108430.92	4228864.57	4352854.84
a. Number of F/T Students	193	193	193	193	193
b. Annual Tuition/Fee Rate	18688.32	19248.9696	19826.4387	20421.2318	21033.8688
Annual Credit Hour Rate	18	18	18	18	18
c. Total F/T Revenue (a x b)	3606845.76	3715051.13	3826502.67	3941297.75	4059536.68
d. Number of P/T Students	29	29	29	29	29
e. Credit Hour Rate	1038.24	1059.0048	1080.1849	1101.78859	1123.82437
f. Annual Credit Hour Rate	9	9	9	9	9
g. Total P/T Revenue (d x e x f)	270980.64	276400.253	281928.258	287566.823	293318.159
3. Grants, Contracts & Other External Sources	0	0	0	0	0
4. Other Sources	0	0	0	0	0
TOTAL (Add 1-4)	3877826.4	3991451.39	4108430.92	4228864.57	4352854.84

The proposed program is expected to generate a steady increase in tuition and fee revenue over its first five years, reflecting stable enrollment trends in both full-time and part-time student categories. Based on historical enrollment patterns, where over 50 new students have joined our graduate data science programs annually for the past five years, we anticipate sustained demand in this growing field of artificial intelligence.

In Year 1, total revenue is projected at $3,877,826, with contributions from 193 full-time students and 29 part-time students. Full-time enrollment will remain steady at 193 students per year, with tuition and fee rates increasing from $18,688 per student in Year 1 to $21,034 in Year 5. Correspondingly, full-time tuition revenue will rise from $3,606,846 in Year 1 to $4,059,537 in Year 5.

Part-time student enrollment is projected to hold at 29 students per year, with tuition calculated based on a per-credit-hour rate that increases incrementally from $1,038 in Year 1 to $1,124 in Year 5. Assuming an average of 9 credit hours per year per part-time student, revenue from this segment is expected to grow from $270,981 in Year 1 to $293,318 in Year 5.

With no reliance on reallocated funds, grants, contracts, or other external sources, tuition and fees will fully support the program's financial sustainability. By Year 5, total revenue is projected to reach $4,352,855, reflecting both modest tuition adjustments and consistent enrollment patterns.

Appendix 11

Table 6: Program Expenditures and Narrative Rationale

	Year 1	Year 2	Year 3	Year 4	Year 5
1. Faculty (b + c below)	201000	207030	213240.9	219638.127	226227.271
a. Number of FTE	1	1	1	1	1
b. Total Salary	150000	154500	159135	163909.05	168826.322
c. Total benefits	51000	52530	54105.9	55729.077	57400.9493
2. Admin. Staff	0	0	0	0	0
3. Support Staff	0	0	0	0	0
4. Technical Support and Equipment	3080	3172.4	3267.572	3365.59916	3466.56713
5. Library	0	0	0	0	0
6. New or Renovated Space	0	0	0	0	0
7. Other Expenses	1597304.79	1645223.93	1694580.65	1745418.07	1797780.61
TOTAL (add 1-7)	1801384.79	1855426.33	1911089.12	1968421.8	2027474.45

To ensure the program's success and long-term sustainability, we have carefully projected expenditures across key categories, accounting for faculty, technical support, and operational needs.

1. Faculty: The program will be supported by one full-time faculty member starting in Year 1, responsible for developing and teaching core courses, advising students, and contributing to program administration. The associated costs include:

- Salary Expenditures: Beginning at $150,000 in Year 1, with annual increases to accommodate cost-of-living adjustments and merit raises, reaching $168,826 by Year 5.
- Fringe Benefits: Estimated at approximately 34% of salary, starting at $51,000 in Year 1 and growing to $57,401 by Year 5.

2. Administrative Staff: No additional full-time administrative staff will be required, as the program will leverage existing institutional resources to handle administrative functions.

3. Support Staff: Similarly, the program will utilize existing support staff within the department, eliminating the need for additional hires.

4. Technical Support and Equipment: To provide the GPD with basic computing needs, funds will be allocated for software licenses, computing resources, and necessary upgrades. To keep pace with inflation and evolving technological needs, expenditures will start at $3,080 in Year 1 and increase to $3,467 by Year 5.

5. Library Resources: No additional library expenses are anticipated. The university's existing digital and physical library resources sufficiently support faculty and student research needs.

6. New or Renovated Space: The program will be housed within existing facilities, requiring no new construction or renovation.

7. Other Expenses: Faculty development, conference travel, memberships, marketing, office supplies, and technology services. Initial expenditures are projected at $1,597,305 in Year 1, rising to $1,797,781 by Year 5 to support program growth, faculty engagement, and continuous improvement.

Total Expenditures: Overall, total program expenditures will increase from $1,801,385 in Year 1 to $2,027,474 in Year 5, ensuring financial sustainability while maintaining high-quality instruction and student support.

	Year 1	Year 2	Year 3	Year 4	Year 5
Program Resources					
1. Reallocated funds	$0	$0	$0	$0	$0
2. Tuition/fee Revenue (c + g below)	$3,877,826	$3,991,451	$4,108,431	$4,228,865	$4,352,855
a. Number of F/T Students	193	193	193	193	193
b. Annual Tuition/Fee Rate	$18,688	$19,249	$19,826	$20,421	$21,034
c. Total F/T Revenue (a x b)	$3,606,846	$3,715,051	$3,826,503	$3,941,298	$4,059,537
d. Number of P/T Students	29	29	29	29	29
e. Credit Hour Rate	$1,038	$1,059	$1,080	$1,102	$1,124
f. Annual Credit Hour Rate	9.0	9	9	9	9
g. Total P/T Revenue (d x e x f)	$270,981	$276,400	$281,928	$287,567	$293,318
3. Grants, Contracts & Other External Sources	$0	$0	$0	$0	$0
4. Other Sources	$0	$0	$0	$0	$0
TOTAL (Add 1-4)	**$3,877,826**	**$3,991,451**	**$4,108,431**	**$4,228,865**	**$4,352,855**
Expenditure Categories					
1. Faculty (b + c below)	$201,000	$207,030	$213,241	$219,638	$226,227
a. Number of FTE	1	1	1	1	1
b. Total Salary	$150,000	$154,500	$159,135	$163,909	$168,826
c. Total benefits	$51,000	$52,530	$54,106	$55,729	$57,401
2. Admin. Staff (b + c below)	$0	$0	$0	$0	$0
a. Number of FTE	0	0	0	0	0
b. Total Salary	0	0	0	0	0
c. Total benefits	0	0	0	0	0
3. Support Staff (b + c below)	$0	$0	$0	$0	$0
a. Number of FTE	0	0	0	0	0
b. Total Salary	0	0	0	0	0
c. Total benefits	0	0	0	0	0
4. Technical Support and Equipment	$3,080	$3,172	$3,268	$3,366	$3,467
5. Library	$0	$0	$0	$0	$0
6. New or Renovated Space	$0	$0	$0	$0	$0
7. Other Expenses	$1,597,305	$1,645,224	$1,694,581	$1,745,418	$1,797,781
TOTAL (add 1-7)	**$1,801,385**	**$1,855,426**	**$1,911,089**	**$1,968,422**	**$2,027,474**

* Due to the nature of this Master's degree, most enrollment will draw from already existing UMBC full-time students who add the degree. As these students do not generate NEW revenues, the budget does not reflect revenue for these students.

Appendix 12

Educational Assessment Methods

Program evaluation is done by assessing learning outcomes using UMBC's existing policies and procedures.

CSEE faculty periodically review syllabi, rubrics, labs, and projects to ensure a standard student experience and that materials used and presented remain relevant viz-a-viz current industry trends.

The CSEE department and UMBC generally evaluate full-time faculty through the university's established promotion and tenure process in the traditional areas of teaching, research, and service. This process includes a review of their syllabi, labs, courseware, samples of student products, classroom observation, and student surveys.

Qualified adjunct faculty, upon verification of their academic and professional credentials, are appointed members of the UMBC Graduate School. Adjunct faculty are evaluated by full-time faculty members through regular curriculum reviews, mentoring, periodic classroom observation, and addressing student feedback promptly to ensure the quality of instruction and the student's educational experience.

All UMBC faculty (regular and adjunct) are evaluated via the administration of online student surveys issued at the end of each semester. The data from this survey is shared with the instructor and publicly available via IRADS, while any qualitative comments received are shared only with the instructor. Faculty are encouraged to work with their program director, colleagues, UMBC's Center for Applied Learning and Teaching (CALT), or the DOIT to conduct objective course assessment and/or pedagogical enhancement.

The Department of CSEE Chair and COEIT Dean regularly review student enrollment, retention, culture, and financial data from a strategic perspective to ensure program outcomes are aligned with Departmental and College priorities under UMBC's *Strategic Plan*. UMBC's Provost Office also engages in strategic and financial reviews of all UMBC programs. Exit surveys for graduating students are conducted each year by the Office of Professional Programs within the DPS as another gauge of the student's educational experience.

The USM's accountability obligation includes a requirement that each academic program be reviewed every seven years. Accordingly, UMBC conducts academic program reviews (APR) to gauge program effectiveness, quality, and culture. As recognized by USM and the Council of Graduate Schools, the APR process has five general purposes: quality assurance, quality improvement, accountability, identification of strategies for improvement, and providing the institution with information for prioritization of resources.

Taken together, UMBC has a robust, multi-stakeholder method to assess academic program effectiveness, learning outcomes, student retention, student/faculty satisfaction, cost-effectiveness, and workforce relevance. These methods are supported by continual internal UMBC evaluation of industry trends and needs to ensure its programs continue to meet current and anticipated industry and workforce requirements in Maryland and beyond.

UNIVERSITY SYSTEM of MARYLAND

BOARD OF REGENTS
SUMMARY OF ITEM FOR ACTION, INFORMATION, OR DISCUSSION

TOPIC: Towson University proposal to create a College of Graduate Studies

COMMITTEE: Education Policy and Student Life and Safety

DATE OF COMMITTEE MEETING: September 4, 2025

SUMMARY: Towson University (TU) has over 3,000 graduate students across 80 graduate programs. The student and faculty policies, curriculum processes, funding, student organizations, and all graduate programs are overseen by the existing Office of Graduate Studies (OGS), Office of Graduate Assistantship, and Office of Graduate Admissions under the leadership of the Dean and Associate Dean of Graduate Studies. Towson University proposes to change the Office of Graduate Studies designation to the **College of Graduate Studies** (CGS) at Towson University to better reflect the increasing complexity and growth in the university's graduate programs.

ALTERNATIVE(S): The Regents may not approve the program or may request further information.

FISCAL IMPACT: Because there are existing offices and staffing handling the work now, the impact is modest. As graduate programming may grow, additional staffing may be needed, and the proposal indicates that budget adjustments are being made through the University's strategic planning structures.

CHANCELLOR'S RECOMMENDATION: That the Education Policy and Student Life and Safety Committee recommend that the Board of Regents approve the proposal from Towson University to create a College of Graduate Studies.

COMMITTEE RECOMMENDATION:	DATE: September 4, 2025
BOARD ACTION:	DATE:
SUBMITTED BY: Alison M. Wrynn 301-445-1992	awrynn@usmd.edu

Proposal for a College of Graduate Studies
Submitted to the University System of Maryland Board of Regents
May 2025

Towson University proposes to create a new College of Graduate Studies beginning in the fall 2025 semester.

According to the bylaws of the Board of Regents for the University System of Maryland (Section III-7.05: *Policy on the Creation/Development by University System of Maryland Institutions of Schools or Colleges),* institutions requesting to create a new school or college must submit a narrative to the BOR addressing five areas:

1. Decision-making process involved
2. Rationale for creation of the new school
3. Mission statement for proposed school
4. Proposed administrative structure and resources needed
5. Faculty resources in place

Background

Towson University (TU) has over 3,000 graduate students across 80 graduate programs. The student and faculty policies, curriculum processes, funding, student organization, and all graduate programs are overseen by the currently existing Office of Graduate Studies (OGS), Office of Graduate Assistantship, and Office of Graduate Admissions under the leadership of the Dean and Associate Dean of Graduate Studies. We propose to change the Office of Graduate Studies designation to the **College of Graduate Studies** (CGS) at Towson University to better reflect the increasing complexity and anticipated growth in the university's graduate programs.

1. <u>Decision-making Process Involved</u>

Discussions on the evolution of the office to a college began during the summer of 2024. The OGS gathered information on similar institutions' structure for graduate administration to support the justification for the Graduate College.

The Academic Senate Executive Committee was informed in April 2025 about the intended change, with the approved proposal brought to the University Curriculum Committee shortly thereafter in accordance with TU policy, and to the Academic Senate as a point of information at the May 2025 meeting.

This proposal was provided to the Provost Office by the Dean of Graduate Studies in Spring 2025. The provost brought the proposal to the President's Cabinet (PC) in May 2025, with the PC voting unanimously for approval.

2. Rationale for Creation of a College of Graduate Studies

The proposal aligns with national graduate education models, including those similar to Towson University (see Appendix I for a list of peer and USM institutional models). The college, which will report to the university's Provost, will help to comprehensively to support graduate recruitment and admissions, graduate program development, graduate student career development, graduate student organizations, and advocacy for graduate students. In addition, the College of Graduate Studies will be involved in supporting the university's graduate students as well as its graduate faculty including their professional development, teaching research and scholarship.

This transition would not require new resources but would elevate existing administrative functions, improve the branding of graduate programs, and better coordinate the several primary units involved in supporting graduate education—the academic colleges, enrollment management, and university marketing and communications.

Towson University is recognized as a Master's Colleges & Universities: Larger Programs institution in the 2021 Carnegie classifications and as a Research Colleges and Universities institution in the 2025 classification. A crucial component of our excellence is graduate education. By reconstituting the College of Graduate Studies, TU aims to achieve the following outcomes:

a. **Increase coordination of efforts to grow graduate enrollment.** Growth in graduate enrollment aligns with current TU enrollment goals and is anticipated to produce growth in revenue. The College of Graduate Studies will facilitate TU's revenue growth by elevating graduate education as an essential component of the university. It also will support our continuing pursuit of Carnegie R2 status by enhancing coordination among graduate admissions, graduate program directors, and university leadership**.**

b. **A College of Graduate Studies will align Towson University with our peers and positively impact rankings.** External perceptions of Towson University as a high-quality academic institution will be enhanced by creating a College of Graduate Studies, which also will support the growth in our rankings. Additionally, forming a College of Graduate Studies will align TU with many of our peer institutions, aspirational peers, and other USM institutions. Appendix II provides information from 18 of these institutions. Currently, 15 of these universities have either a school or college dedicated to graduate programs. Additionally, 64% of the 200 member institutions responding to a survey on the organization and administration of Graduate Education by the Council of Graduate Schools in 2019 indicated that their formal administrative name included either "Graduate College" or "Graduate School." Forty-eight percent are led by a Dean and an additional 27% are led by an Associate/Vice Provost and Dean.

c. **A College of Graduate Studies will provide an incubator for new interdisciplinary programs**. Recognizing the growing complexity of the modern world, the CGS will enhance the collaboration, innovation and development of broader skills sets as the host for new cross-college programs. By addressing complex real-world problems, through innovation and research, these programs quickly will develop solutions to meet evolving industry needs.

These programs will educate students by providing an expanded set of skills needed to thrive in diverse professional settings and address global problems.

d. **The College will provide an identity, belonging and a home for our 3,000+ graduate students.** Because Towson University has historically been perceived as a primarily undergraduate institution, its graduate students are often overlooked in programming and planning. By creating a home and unique identity for these students the community of advanced learners will be enhanced through additional programming and opportunities for networking.

3. Mission Statement for the College of Graduate Studies

The mission of the TU College of Graduate Studies is to enhance the university's impact by supporting graduate students in pursuing scholarly activities, conducting advanced research, and receiving professional training while preparing for careers that will benefit the Maryland economy and beyond.

4. Proposed Administrative Structure and Necessary Resources

A Dean and Associate Dean of Graduate Studies, Director of Accelerated Programs, along with ten staff members (four support staff and six supporting graduate admissions) are currently in place within the Office of Graduate Studies at TU (Appendix II). Additionally, there are strong partnerships with the Division of Enrollment Management (DEM) and University Marketing and Communications (UMC). Within UMC, 1.5 staff members are dedicated to graduate marketing, and the DEM provides technical and physical support for graduate events and communication. As the College of Graduate Studies continues to grow, additional staff support will be required to enhance graduate student enrollment and record management, expand accelerated degree programs, and provide student and post-doctoral support services.

Budget adjustments via the University Strategic Enrollment Management structure and R2 initiative are currently underway, with recent investments focusing on both recruitment outreach and resources for students. A robust College of Graduate Studies will improve opportunities in the regional and national markets for our programs. Costs for rebranding (website, printed materials, banners, etc.) will be minimal, as current materials were created under “Graduate Studies” instead of “Office of Graduate Studies, " meaning any expenses would be one-time and manageable internally.

5. Faculty Resources in place

All TU-tenured and tenure-track faculty are members of the Graduate Faculty. No new faculty or staff members will be hired for this proposal. This proposal does not create or change the academic home of any existing programs but rather provides an incubator for the development of new interdisciplinary programs. Many TU faculty are actively engaged in graduate education, and faculty resources are currently in place to meet student demand in existing programs. Establishing the College of Graduate Studies would provide additional focused support for faculty lines dedicated to graduate education and will help to meet the anticipated need for faculty professional development as the graduate program portfolio matures.

Appendix I: Graduate Administrative Structure Summary

USM INSTITUTIONS

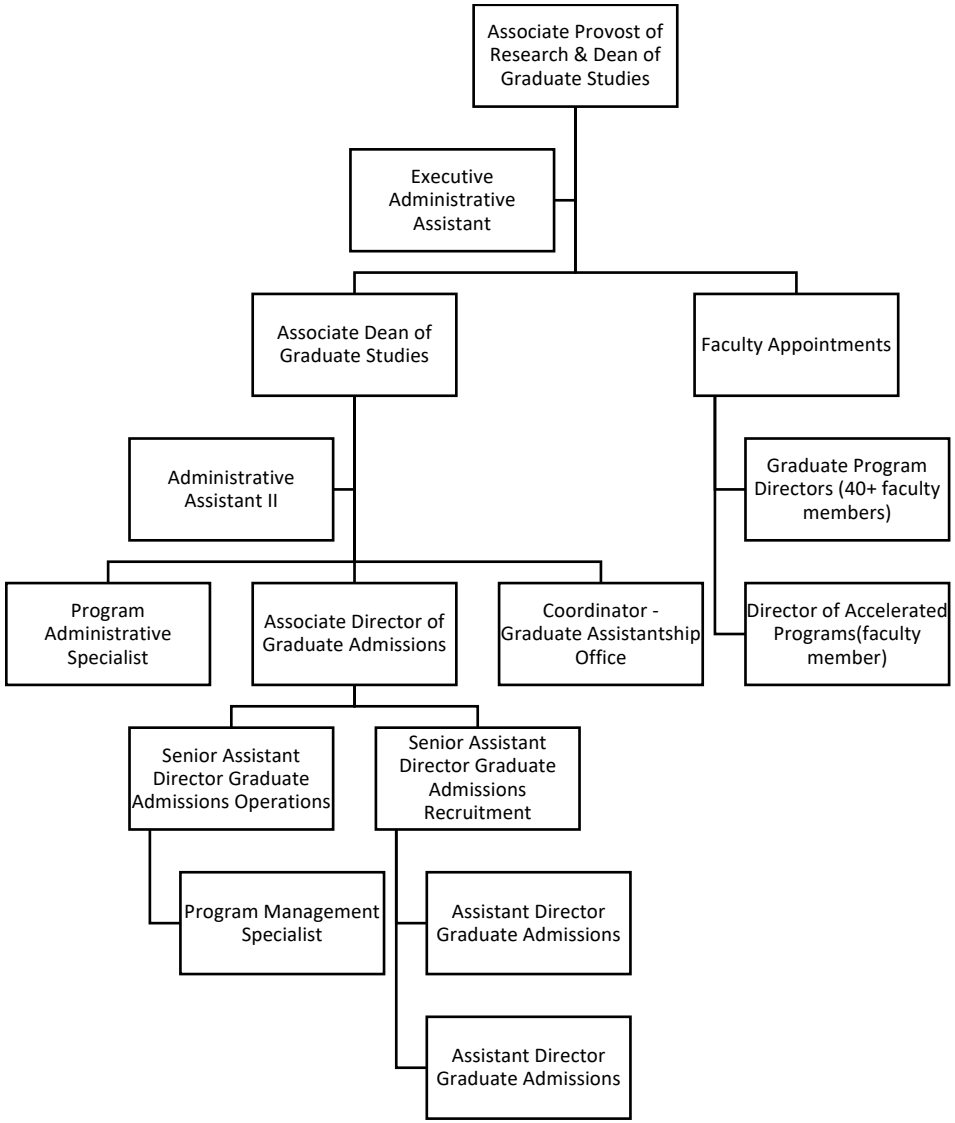
Campus	Graduate Divisions	Lead Officer	Duties	Graduate Programs
Bowie State University www.bowiestate.edu	Graduate School	Dean	• Admissions • Research • Fellowships	• 19 Master's Degrees • 3 Doctoral Degrees • 17 Graduate Certificates
Coppin State University www.coppin.edu	School of Graduate Studies	Dean	• Admissions • Research • Policies • Grad Assistants	• 13 Master's Programs • 1 Doctoral Program • 8 Graduate Certificates
Frostburg State University www.frostburg.edu	Office of Graduate Services	Associate Provost for Graduate Association	• Admissions • Graduate Assistants	• 16 Master's Programs • 1 Doctoral Program
Salisbury University www.salisbury.edu	Graduate School	Dean	• Research Policies • Graduate Assistants • Graduate Curriculum	• 11 Master's Programs • 2 Doctoral Programs • 5 Graduate Certificates
University of Maryland College Park www.umd.edu	The Graduate School	Associate Provost and Dean	• Admissions • Fellowships • Graduate Assistants • Graduate Curriculum	• 107 Master's Programs • 82 Doctoral Programs • 113 Graduate Certificate Programs
University of Maryland Baltimore County https://umbc.edu/	The Graduate School at UMBC	Vice Provost and Dean	• Admissions • Registration • Technology • Marketing	• 42 Master's Programs • 24 Doctoral • 27 Graduate Certificates
University of Maryland Eastern Shore https://wwwcp.umes.edu/grad/	School of Graduate Studies	Dean	• Admissions • Policies • Graduate Assistants • Research	• 21 Master's Programs • 9 Doctoral Programs • 2 Graduate Certificates • 5 staff members

PEER INSTITUTIONS

Campus	Graduate Divisions	Lead Officer	Duties	Graduate Programs
Appalachian State University www.appstate.edu	School of Graduate Studies	Dean	• Admissions • Recruiting • Student Services • Online Planning • Graduate Assistants • Professional Development	• 60 Master's Programs • 2 Doctoral Programs • 36 Certificates
California State University, Fullerton www.fullerton.edu	Office of Graduate Studies	Director of Graduate Studies	• Advising • Admissions • Graduation • Thesis/Dissertation Review	• 61 Master's Programs • 2 Doctoral Programs
Indiana University of Pennsylvania www.iup.edu	School of Graduate Studies and Research	Dean	• Thesis/Dissertations • Commencement • Funding	• 38 Master's Programs • 14 Doctoral Programs • 13 Graduate Certificates
James Madison University www.jmu.edu	The Graduate School	Dean	• Admissions • Assistantships • Funding • Thesis/Dissertation • Commencement	• 53 Master's Programs • 8 Doctoral Programs • 3 Graduate Certificates
Minnesota State University, Mankato www.mnsu.edu	College of Graduate Studies and Research	Dean	• Assistantships • Funding/Research Grants • Degree Audits • Graduation Applications • Thesis/Dissertation	• 68 Master's Programs • 5 Doctoral Programs • 45 Certificates
Montclair State University www.montclair.edu	The Graduate School	Dean	• Assistantships • Thesis/Dissertation • Admissions	• 48 Master's Programs • 6 Doctoral Programs • 37 Graduate Certificates

University of Massachusetts – Dartmouth www.umassd.edu	Office of Graduate Studies	Associate Provost	• Fellowships • Thesis/Dissertations • Admissions	• 30 Master's Programs • 10 Doctoral Programs • 15 Graduate Certificates
University of North Carolina, Charlotte www.charlotte.edu	The Graduate School	Associate Provost/Dean	• Assistantships • Appeals • Funding • Graduation tracking	• 71 Master's Programs • 24 Doctoral Programs • 60 Graduate Certificates
University of North Carolina, Wilmington www.uncw.edu	The Graduate School	Dean, Graduate School	• Admissions • Student Travel Awards • GSA • Graduate Council • Graduate Assistants	• 37 Master's Programs • 6 Doctoral Programs
West Chester University of Pennsylvania www.wcupa.edu	The Graduate School	Dean of The Graduate School	• Admissions • Recruitment • Records • Registration • Graduate Assistants • Program Coordinators	• 73 Master's Programs • 7 Doctoral Programs • 47 Graduate Certificates • 1 Letter of Completion • 5 Post Bac Certs
Western Washington University www.wwu.edu	Graduate School	Dean of the Graduate School/Vice Provost for Research	• Admissions • Graduate Assistants • Academic Policy • Advising	• 30 Master's Programs • 2 Doctoral Programs • 7 Graduate Certificates

Appendix II: Current Office of Graduate Studies Organization



UNIVERSITY SYSTEM of MARYLAND

BOARD OF REGENTS

SUMMARY OF ITEM FOR ACTION, INFORMATION OR DISCUSSION

TOPIC: Annual Review: EPSLS Committee Bylaws and Charge and Role and Responsibilities

COMMITTEE: Committee on Education Policy and Student Life and Safety

DATE OF MEETING: September 4, 2025

SUMMARY: At the first committee meeting of every year, the Committee on Education Policy and Student Life and Safety reviews its bylaws and charge. These are then sent to the Committee on Governance and Compensation for review and approval.

ALTERNATIVE(S): Regents can offer recommendations that can be agreed upon during the meeting or taken back for further exploration and consideration.

FISCAL IMPACT: There is no fiscal impact.

CHANCELLOR'S RECOMMENDATION: The Chancellor recommends that the Committee on Education Policy and Student Life and Safety recommend that the Board of Regents reaffirm (1) the EPSLS section of the Board of Regent Bylaws and (2) the EPSLS Committee Charge, Role, and Responsibilities guidance.

COMMITTEE ACTION:	DATE: September 4, 2025
BOARD ACTION:	DATE:

SUBMITTED BY: Alison Wrynn, awrynn@usmd.edu; 301-445-1992

BYLAWS OF THE BOARD OF REGENTS
OF THE UNIVERSITY SYSTEM OF MARYLAND

(Adopted by the Board of Regents, April 5, 1989; Amended, September 27, 1990; Amended February 27, 1991; Amended June 9, 1995; Amended August 25, 1995; Amended December 1, 1995; Amended April 12, 1996; Amended April 4, 1997, Amended December 8, 2000, Amended August 23, 2002; Amended September 12, 2003; Amended December 12, 2003, Amended October 21, 2005, Amended September, 2008, Amended April 15, 2011, Amended December 7, 2012, Amended April 11, 2014, Amended June 10, 2016, Amended December 9, 2016, Amended February 22, 2019; Amended April 6, 2020 to be effective immediately, Amended April 16, 2021 to be effective July 1, 2021, Amended November 10, 2023, Amended December 15, 2023)

Article X

Section 1. Standing Committees of the Board. The Standing Committees of the Board are the Committee on Audit, the Committee on Education Policy and Student Life and Safety, the Committee on Finance, the Committee of the Whole, the Committee on Governance and Compensation, the Committee on Advancement, the Committee on Economic Development and Technology Commercialization, and the Committee on Intercollegiate Athletics and Student-Athlete Health and Welfare.

Section 4. Committee on Education Policy and Student Life and Safety.
A. The Committee on Education Policy and Student Life and Safety shall consider and report or recommend to the Board on all matters relating to institutional mission statements and education policies and programs for all institutions and major units, and all issues relating to academic programs such as curriculum development, adequacy of instructional facilities and specialized centers and institutes, and institutional support for student academic services.

a. This Committee shall consider and report or recommend to the Board proposals for new academic programs and review and report to the board on the review of existing academic programs that align with the institution's mission, strategic plan, and priorities.

b. This Committee shall also consider and report or recommend to the Board on matters and policies relating to faculty, including but not limited to conditions affecting recruitment, appointment, rank, tenure, and retention, and issues brought to the Advisory Councils and USM Office of Academic and Student Affairs.

B. This Committee shall also consider and report or recommend to the Board matters and policies related to students and student support services including, but not limited to, college readiness, student enrollment, recruitment, retention, transfer, and articulation; financial aid; campus safety and security; student health and wellness; student government; and student organizations.

C. This Committee shall also consider and report or recommend to the Board matters and policies on inter-institutional cooperation, System-wide activities to include, but not limited to, training and public service, and collaborations with affiliated organizations.

D. This Committee shall also consider or report or recommend to the Board:

a. student-athlete health, wellness, and academic matters brought to it by the Committee on Intercollegiate Athletics and Student-Athlete Health and Welfare, the Chancellor, or the Board;

b. alumni engagement and related matters brought to it by the Committee on Advancement, the Chancellor, or the Board; and

c. research and related matters brought to it by the Committee on Economic Development & Technology Commercialization, the Chancellor, or the Board.

UNIVERSITY SYSTEM
of MARYLAND

Board of Regents
Committee on Education Policy and Student Life and Safety
Charge, Role, and Responsibilities

Charge:
The Committee on Education Policy and Student Life and Safety shall perform all necessary business and provide guidance to the Board of Regents on issues that pertain to academic affairs and student affairs functions at the institutions within the University System of Maryland.

Role and Responsibilities:
The Committee on Education Policy and Student Life and Safety shall consider and report or recommend to the Board of Regents on matters concerning academic and student affairs-related policies and programs for all institutions and major units including, but not limited to, all issues relating to academic programs such as curriculum development, adequacy of instructional facilities and specialized centers and institutes, and institutional support for student academic services; matters and policies relating to faculty; student enrollment, recruitment, retention, transfer, and articulation; financial aid; campus safety and security; student health and wellness; student government; and student organizations; and the overall intellectual, social, and emotional climate of the university.

Members of the Committee on Education Policy and Student Life and Safety are appointed annually by the Chairperson of the Board. The Committee holds at least five regularly scheduled meetings during the fiscal year. The members of the Committee may expect to receive information for review in order to consider and report or recommend to the Board of Regents on any of the following matters:

A. Institutional mission statements and goals
B. Establishment and disestablishment of schools and colleges
C. Proposals for new academic programs
D. Review of existing academic programs and enrollments within those programs
E. P-20 partnerships and initiatives
F. Academic transformation and innovation
G. Academic integrity
H. Libraries
I. Civic education and civic engagement
J. Student life and student services
K. Diversity, equity, inclusion, and accessibility
L. Global engagement
M. Student enrollment, recruitment, and retention
N. Transfer and articulation
O. Access and affordability
P. Student health and wellness
Q. Campus safety and security

R. Title IX and sexual misconduct
S. Faculty life and faculty conduct
T. Faculty policies and procedures including, but not limited to, appointments in rank and promotion to tenure
U. Faculty workload
V. Faculty awards nominations
W. Student awards and scholarships
X. Honorary degree nominations
Y. Extramural funding
Z. Relevant issues, reports, or requests as brought to the USM by the Maryland Higher Education Commission and other state agencies
AA. Additional pertinent issues as raised by the student, staff, and faculty advisory councils; university administrators; USM officials; and regents

The Committee on Education Policy and Student Life and Safety may receive, for information purposes from the Committee on Intercollegiate Athletics and Student-Athlete Health and Welfare, reports on academic issues (including but not limited to Academic Progress Rate and mid-year academic indicators) for and the health and wellness of student athletes and/or athletics teams.

UNIVERSITY SYSTEM of MARYLAND

BOARD OF REGENTS

SUMMARY OF ITEM FOR ACTION,
INFORMATION OR DISCUSSION

TOPIC: Update on Digital Accessibility

COMMITTEE: Committee on Education Policy and Student Life and Safety

DATE OF MEETING: September 4, 2025

SUMMARY: This information session will highlight the efforts being undertaken to meet the goal of digital accessibility as outlined in new Title II regulations by April 2026. The session will provide an overview of the new guidelines as well as support that is being organized by the USM Kirwan Center for Academic Innovation, in conjunction with colleagues across the USM.

USM Digital Accessibility Resources

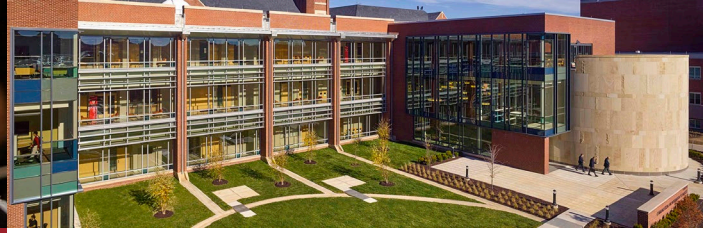
- USM DA Working Group – provide consultative and training support
- USM Digital Accessibility Hub – one-stop resource center
- Monthly Remediation Sprints – System-wide training opportunities
- USM Accessibility in Action Monthly Newsletter – sign up to follow our collective journey

ALTERNATIVE(S): This is an information item.

FISCAL IMPACT: This is an information item.

CHANCELLOR'S RECOMMENDATION: This is an information item.

COMMITTEE ACTION:	DATE: September 4, 2025
BOARD ACTION:	DATE:
SUBMITTED BY: Alison Wrynn, awrynn@usmd.edu; 301-445-1992	



What's New with Title II? Digital Accessibility across USM

Prepared for the USM EPSLS BOR Committee by Nancy O'Neill, USM Kirwan Center for Academic Innovation

University System of Maryland

Objectives

- Highlight what we mean by Digital Accessibility
- Provide an overview of the new Title II Digital Accessibility regulations and compliance deadline
- Share what the Kirwan Center is doing to support USM institutions

Accessibility vs. Accommodation

- Accessibility refers to proactively designing environments, products, and services so they can be used by everyone from the start.
- Accommodation involves making reactive, individualized changes or adjustments to meet the specific needs of a person with a disability after the fact.

Both are important for individuals with disabilities, but philosophically, our intent is to support a paradigm shift...

Paradigm Shift: Building Accessibly

- From an accommodation mindset to an accessibility mindset
- From a focus on IT/Web Accessibility to a focus on Digital Accessibility
- From this being the work of a disability support services office/IT office to this being everyone's responsibility

Defining Digital Accessibility

"Digital accessibility refers to the intentional design of electronic technologies **and materials** so that they are usable by all people, including people with disabilities. In the case of our increasingly technology-enhanced courses, digital accessibility means equal access to educational opportunity."

- USM Kirwan Center for Academic Innovation

The Digital Accessibility Challenge

- **What's New:** New Title II regulations have an April 2026 deadline where all digital content must be accessible
- **Broad Impact:** Websites, emails, documents, media, third-party tools, password-protected files
- **Current Reality:** Most institutions are significantly behind in preparation
- **Common Barriers:** Awareness, skills, time, competing priorities
- **Significant Risk:** Legal vulnerability, student and staff inequity, reputational damage

Beyond Compliance: Why this Matters

- **Student, Faculty, and Staff Success:** ensures everyone can access all materials in an equally effective manner
- **Inclusive Excellence:** aligns with our institutional values
- **Enrollment Impact:** prospective students notice accessibility shortcomings
- **Legal Protection:** prevents complaints and litigation
- **Public Mission:** fulfills our obligation to serve all Marylanders and those who connect to Maryland by way of our institutions

Understanding the Title II DOJ Rule

- Title II of the ADA prohibits discrimination against individuals with disabilities
- The DOJ published a final rule in 2024 that updates and adds to existing Title II regulations, clarifying digital accessibility requirements for public entities
- Requires WCAG 2.1 AA compliance standards for all digital content that is shared
- No blanket exceptions for content age, creator, or location (websites, intranet platforms, learning management systems, etc.)

The Leadership Role

- Position accessibility as a core value
- Use effective messaging
- Ensure necessary tools and support
- Provide structure, guidance, and recognition
- Guide people through significant workflow changes
- Set expectations and benchmarks

Kirwan Center Support

- Digital Accessibility Work Group – consultative support to institutions
- USM Digital Accessibility Hub – resource center
- Remediation “Sprints” provide hands-on time working through the six essential steps
- Digital Accessibility monthly newsletter
- Deans and Chairs, Campus Leaders information sessions, toolkits
- Digital Accessibility faculty mini-grants program
- Fall convening with the National Federation of the Blind

What Success Looks Like

- We routinely produce and use accessible materials/platforms/tools, from the start
- Students, faculty, and staff with disabilities seamlessly access content and services
- Department/Unit, Institutional, and System culture values and recognizes inclusive accessibility practices
- We undertake regular assessment and continuous improvement

USM Resources

- USM DA Working Group – consultative and training support
- USM Digital Accessibility Hub – one-stop resource center
- Monthly remediation Sprints – System-wide training opportunities
- USM Accessibility in Action Monthly Newsletter – sign up to follow our collective journey

Questions/Discussion

UNIVERSITY SYSTEM of MARYLAND

BOARD OF REGENTS
SUMMARY OF ITEM FOR ACTION, INFORMATION, OR DISCUSSION

TOPIC: Report on Academic Program Actions Delegated to the Chancellor, AY 2024-2025

COMMITTEE: Education Policy and Student Life and Safety

DATE OF COMMITTEE MEETING: September 4, 2025

SUMMARY: In accordance with Board Resolution III-7.03, a report is submitted annually to the Board of Regents of program actions delegated to the Chancellor. Between September 2024 and August 2025, the Chancellor approved 108, including:

- suspension or discontinuation of 51 programs (including 16 degree programs, 17 certificates, 16 areas of concentration within an existing degree, and 2 offerings of off-campus, non-RHEC programs); 1 suspended program was reactivated;
- 14 title changes;
- 19 new certificates (undergraduate and graduate combined);
- 10 additions of online modality to an existing program; and
- 14 other actions, including new areas of concentration, modifications to existing degree programs, and new off-site locations.

In addition, the Board of Regents approved 35 new degree programs, one of which will be offered at the Universities at Shady Grove.

A chart detailing the Chancellor's actions and programs approved by the Board, for a total of 143 approvals, is attached.

ALTERNATIVE(S): This is an information item.

FISCAL IMPACT: This is an information item.

CHANCELLOR'S RECOMMENDATION: This is an information item.

COMMITTEE RECOMMENDATION: Information Only		DATE: September 4, 2025
BOARD ACTION: Information Only		DATE:
SUBMITTED BY: Alison Wrynn	301-445-1992	awrynn@usmd.edu

Academic Program Actions

AY 2024 - 2025

Institution	Chancellor's Actions			Board Actions
	Discontinued or Suspended Concentrations and Programs	New Certificates, Concentrations, Substantively Modified Programs, and Degree Changes	Title Changes	
Bowie State University (BSU)		Add online modality to PBC in Public Health Informatics (September, 2024) New Standalone UDC in English for Speakers of Other Languages (ESOL) - Fully Online (February 3, 2025) New PBC in English for Speakers of Other Languages (ESOL) (January, 2025) Add online modality to PBC in Project Management (January, 2025) Add online modality BS Early Childhood Education (AOC) Special Education (January, 2025) Add online modality BS Elementary Education (January, 2025)	Retitle Doctor of Applied Science in Computer Science to Doctor of Science in Computer Science (July, 2025)	New BS Artificial Intelligence (BOR approval June 13, 2025; MHEC letter pending) New BA in Dance (July 29, 2025) New BS in Accounting (May 15, 2025) New BS Immersive Media, Entertainment, and Gaming (January 25, 2025) New MEd in English for Speakers of Other Languages (ESOL) (October 29, 2024)

AOC: Area of Concentration
BA: Bachelor of Arts
BFA: Bachelor of Fine Arts
BS: Bachelor of Science
BTS: Bachelor of Technical Studies
CAS: Certificate of Advanced Studies
DNP: Doctor of Nursing Practice
MA: Master of Arts
MFA: Master of Fine Arts
MPS: Master of Professional Studies
LDC: Lower-Division Certificate
PhD: Doctor of Philosophy
PBC: Post-Baccalaureate Certificate
PMC: Post-Master's Certificate
UDC: Upper-Division Certificate

Institution	Chancellor's Actions			Board Actions
	Discontinued or Suspended Concentrations and Programs	New Certificates and Concentrations/Modified Programs and Degree Changes	Title Changes	
Coppin State University (CSU)	Suspend BA in Global Studies (April, 2025) Suspend MEd Special Education program (April, 2025)	New PBC in Contemporary Teacher Leadership within existing MEd in Teacher Leadership (November, 2024) New PBC in Teacher Leadership in High Tech and High Impact Practices within the existing MEd Teacher Leadership (November, 2024) New PBC in Teacher Leadership in Action within the existing MEd Teacher Leadership (November, 2024) New PBC in Teacher Leadership in Culturally Sustaining Practice within the existing MEd in Teacher Leadership (November, 2024) New PBC in Teacher Leadership in Action within existing MEd in Teacher Leadership (November, 2024) New AOC in Early Childhood Education within existing MA (July, 2025) New AOC in Special Education within existing MAT (July, 2025) Add online modality to BS Marketing (July, 2025)		

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MA: Master of Arts
MFA: Master of Fine Arts
MPS: Master of Professional Studies
MS: Master of Science

LDC: Lower-Division Certificate
PhD: Doctor of Philosophy
PBC: Post-Baccalaureate Certificate
PMC: Post-Master's Certificate
UDC: Upper-Division Certificate

Institution	Chancellor's Actions			Board Actions
	Discontinued or Suspended Concentrations and Programs	New Certificates and Concentrations/Modified Programs and Degree Changes	Title Changes	
Frostburg State University (FSU)	Suspend Community Health AOC within the BS in Health and Wellness Education (April, 2025) Suspend AOC International History within BA History (July, 2025) Suspend AOC History of the Americas within BA History (July, 2025) Suspend BS Music AOCs in 1) Vocal Performance, 2) Music Industry (July, 2025)	Substantial Modification BA History (May, 2025) Add online modality to Master of Environmental Management (May, 2025) New areas of concentration for the newly approved B.Music : 1) Vocal Performance 2) Instrumental Performance 3) Music Industry (July, 2025) Substantively modify the existing BS in Music (July, 2025)		New BS Applied Computer Science (July 14, 2025) New Bachelor of Music (July 14, 2025)

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MPS: Master of Professional Studies
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Institution	Chancellor's Actions			Board Actions
	Discontinued or Suspended Concentrations and Programs	New Certificates and Concentrations/Modified Programs and Degree Changes	Title Changes	
Salisbury University (SU)		New AOC in Family Nurse Practitioner within MSN (September, 2024) Modality change to online for the MA in Conflict Analysis and Dispute Resolution (November, 2024)		New BS Biochemistry and Molecular Biology (June 25, 2025) New BS in Coastal Engineering (January 9, 2025)

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Institution	Chancellor's Actions			Board Actions
	Discontinued or Suspended Concentrations and Programs	New Certificates and Concentrations/Modified Programs and Degree Changes	Title Changes	
Towson University (TU)	Suspend the MA in Jewish Studies (May, 2025) Discontinue PBC Nursing Education (August, 2025) Discontinue MS in Social Science (August, 2025) Discontinue BS in Athletic Training (August, 2025) Discontinue CAS Reading Education (August, 2025) Discontinue PBC in Integrated STEM Instructional Leadership (August, 2025) Discontinue AOC in Clinical to Administrative Transition within MS Nursing (August, 2025) Discontinue AOC in Nursing Education within MS Nursing (August, 2025) Reactivate BS in Occupation and Well Being (July, 2025) Suspend PBC Arts Integration (July, 2025) Discontinue AOC in Computational Physics within BS Physics (July,2025)	New PBC in Geospatial Technologies (May, 2025) New PBC in Forensic Firearms and Toolmarks Analysis MS in Forensic Science (April, 2025) New PBC in Communicating Complex Information (July, 2025) Add online modality to MS in Mathematics Education (July, 2025) New PBC in Gifted and Creative Education within MEd in Gifted and Creative Ed. (July, 2025) Substantial modification of BS Physical Education (July, 2025)	Retitle Bachelor of Music (BM) AOC in Voice to AOC in Voice Performance (April, 2025) Retitle Bachelor of Music (BM) AOC in Keyboard to AOC in Keyboard Performance (April, 2025) Retitle Bachelor of Music (BM) AOC in Guitar to AOC in Guitar Performance (April, 2025) Retitle AOC in Applied Physics within BS Physics to AOC in Applied Physics and Engineering (July, 2025) Retitle BS Physical Education to BS Health and Physical Education (July, 2025)	

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	Discontinued or Suspended Concentrations and Programs	New Certificates and Concentrations/Modified Programs and Degree Changes	Title Changes	
University of Baltimore (UBalt)	Suspension of BA in Arts Production & Management (November, 2024) Suspend AOC in Finance within MS Business-Finance (July, 2025) Suspend UDC Forensic Document Analysis (July, 2025)	New PBC in AI Applications for Business (MHEC approval pending) New PBC in Fundamentals of AI for Business (MHEC approval pending) Substantial modification of MBA (February, 2025)	Retitle MS in Business with AOC in Finance to MS in Finance (November, 2024)	New BS AI for IT Operations (February 11, 2025) New MS User-Centered Cybersecurity (January 10, 2025) New MS AI for Business (August 19, 2025)

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Institution	Chancellor's Actions			Board Actions
	Discontinued or Suspended Concentrations and Programs	New Certificates and Concentrations/Modified Programs and Degree Changes	Title Changes	
University of Maryland, Baltimore (UMB)	Discontinuations: PBC Oral Health Sciences (Febr, 2025) PMC Gerontology Acute Care (June'25) PBC & MS Vulnerability and Violence Reduction (May, 2025) MS Applied and Professional Ethics (May, 2025) PMC Pediatric Nurse Practitioner Primary Care (April, 2025) PMC Pediatric Acute Care Nurse Practitioner (April, 2025) PMC in Psychiatric Mental Health Nurse Practitioner (April, 2025) PMC Adult-Gerontological Primary Care Nurse Practitioner / Adult-Gerontol. Clinical Specialist (April, 2025) PMC Adult-Gerontological Nurse Practitioner (April, 2025) PMC Family Nurse Practitioner (April'25) PBC User Experience (July, 2025) BS Health Science (July, 2025) PBC Health Sciences (July, 2025) MS & PhD Toxicology (July, 2025)	New PBC in Real World Data & Pragmatic Research within MSN program (November, 2024) Substantial Modification Bachelor of Science in Nursing (May, 2025)	Retitle MS in Diversity, Equity, and Inclusion Leadership as MS in Leadership for Organizational Change (April, 2025) Retitle PBC in Intercultural Leadership as PBC in Leading Across Difference (April, 2025)	New Doctor (DSW) Social Work (February 28, 2025) New MS in Artificial Intelligence for Drug Development (January 10, 2025) New MS Medical and Health Studies (January 2, 2025) New MS Trauma Sciences (February 25, 2025)

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Institution	Chancellor's Actions			Board Actions
	Discontinued or Suspended Concentrations and Programs	New Certificates and Concentrations/Modified Programs and Degree Changes	Title Changes	
University of Maryland, Baltimore County (UMBC)	Discontinue of UDC in Meida and Communications Studies (November, 2024)	New AOC in Literature and Culture within existing BA in English (January, 2025) New AOC in Writing, Rhetoric, and Technology within existing BA in English (January, 2025) New standalone UDC in Philosophy, Politics, Economics and Law (PPEL) (May, 2025)	Retitle BA in Music Education as BA in Music Teaching and Learning (February, 2025) Retitle BFA Visual Arts AOC in Print Media as AOC in Print and Intermedia Arts (May, 2025)	

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Institution	Chancellor's Actions			Board Actions
	Discontinued or Suspended Concentrations and Programs	New Certificates and Concentrations/Modified Programs and Degree Changes	Title Changes	
University of Maryland, College Park (UMD/UMCP)	Discontinue Vietnam location of MPS in Justice Leadership (July, 2025) Discontinue Nanjing location MA Criminal Justice and Criminology (July, 2025)	CIP Code change for BS in Bioengineering (September, 2024) New PBC in Professional Studies iteration - Equitable Mathematics Education Leadership (November, 2024) New iteration of PBC in Professional Studies - Program Planning in Public Health and Physical Activity (May, 2025) Change location for Baltimore City MBA from BioPark to Baltimore Peninsula (MHEC approval pending) Add online modality PBC in Intelligence Analysis (July, 2025)	Retitle BS Family Science as BS Family Health (May, 2025)	New MS in Information (June 10, 2025) New MS in Artificial Intelligence (June 10, 2025) New BA Global Culture and Thought (MHEC letter pending) New BA Global and Foreign Policy (July 21, 2025) New BA Public Service Interpreting and Translation – at Shady Grove (August 6, 2025) New MS in Biostatistics (February 11, 2025) New Ph.D. in Biostatistics (February 11, 2025) New MS in Climate Finance and Risk Management (October 9, 2025)

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Institution	Chancellor's Actions			Board Actions
	Discontinued or Suspended Concentrations and Programs	New Certificates and Concentrations/Modified Programs and Degree Changes	Title Changes	
University of Maryland, Eastern Shore (UMES)	Suspend BA Music Education (April, 2025) Suspend BA Popular Music and Jazz (April, 2025)	New stand-alone UDC in Business Analytics (August 18, 2025) Add online PhD. In Applied Computer Engineering with AOC in Cybersecurity (April, 2025)	Retitle MS Cybersecurity Engineering Technology to MS in Applied Cybersecurity Engineering (January, 2025)	New BS Electrical Engineering (June 17, 2025) New BS Mechanical Engineering (June 13, 2025) New BS in Private Club Management (July 22, 2025) New BS Mathematics (pending MHEC letter)

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Institution	Chancellor's Actions			Board Actions
	Discontinued or Suspended Concentrations and Programs	New Certificates and Concentrations/Modified Programs and Degree Changes	Title Changes	
University of Maryland, Global Campus (UMGC)	Discontinue the MS degree in Software Engineering (September, 2024) Suspend 5 AOC within the MS in Management: AOC in Information Systems AOC in Criminal Justice Management AOC Emergency Management AOC Homeland Security Management AOC Intelligence Management (April, 2025) Suspend BS Management Studies (April, 2025) Suspend MAT (April, 2025) Suspend MS Information Technology– AOC in Information Assurance (April, 2025) Suspend MS Information Technology– AOC in Management Information Systems (April, 2025)	Doctor of Business Administration (DBA) substantive modification (September. 2024) Change the CIP code of the DBA (September, 2024) New PBC Teaching Cybersecurity within the existing MS in Cybersecurity Technology (November, 2024) Substantively modify the BS in Business Administration (November, 2024)	Retitle BS in Business Administration as BS in Business Administration and Management (April, 2025)	New MS in Applied Artificial Intelligence (June 13, 2025) New BS in Artificial Intelligence (September 23, 2024) New MS in Homeland Security Leadership (September 23, 2025) New MS Public Safety Leadership (September 23, 2025) New BS in Sustainable Value Chain (October 9, 2024) New MS in Innovation and Entrepreneurial Leadership (September 23, 2025) New MS in Operations Management (October 9, 2024)

AOC: Area of Concentration
BA: Bachelor of Arts
BFA: Bachelor of Fine Arts
BS: Bachelor of Science
BTS: Bachelor of Technical Studies
BPS: Bachelor of Professional Studies
CAS: Certificate of Advanced Studies
DNP: Doctor of Nursing Practice
MA: Master of Arts
MFA: Master of Fine Arts
MPS: Master of Professional Studies
MS: Master of Science
LDC: Lower-Division Certificate
PBC: Post-Baccalaureate Certificate
PMC: Post-Master's Certificate
UDC: Upper-Division Certificate

UNIVERSITY SYSTEM of MARYLAND

BOARD OF REGENTS

SUMMARY OF ITEM FOR ACTION, INFORMATION OR DISCUSSION

TOPIC: Education Policy and Student Life and Safety Tentative Annual Agenda and Workplan, 2025-2026

COMMITTEE: Committee on Education Policy and Student Life and Safety

DATE OF MEETING: September 4, 2025

SUMMARY: The Tentative Agenda for 2025-2026 comprises anticipated action items, including new academic program proposals and new Board of Regents policies, as well as information and discussion items. Some of the information items are reported on an annual schedule to ensure that the regents are well informed about topics of general interest (e.g., extramural funding, civic engagement and education, academic innovation), while others respond to specific requests for reports and recommendations on a variety of topics of interest to the Committee as previously noted by the regents.

The attached workplan outlines the regular items that will appear on the agenda this year.

Today, the Committee has an opportunity to review the proposed annual agenda and workplan and suggest modifications, including the addition of items that Committee members believe warrant particular attention by the Board.

ALTERNATIVE(S): This is an information item.

FISCAL IMPACT: This is an information item.

CHANCELLOR'S RECOMMENDATION: This is an information item.

COMMITTEE ACTION:	DATE: September 4, 2025
BOARD ACTION:	DATE:
SUBMITTED BY: Alison Wrynn, awrynn@usmd.edu; 301-445-1992	

USM BOARD OF REGENTS
COMMITTEE ON EDUCATION POLICY AND STUDENT LIFE AND SAFETY
TENTATIVE AGENDA 2025-2026

Thursday, September 4, 2025 (9:30am; Virtual)

1. New Academic Program Proposals (Action)
2. EPSLS Overview: Annual EPSLS Bylaws and Charge Review (Action)
3. Update on Digital Accessibility (Information)
4. Report on Academic Program Actions Delegated to the Chancellor, AY 2024-2025 (Information)
5. Update on Digital Accessibility (Information)
6. Tentative Annual Agenda, 2025-2026 and Workplan (Information)

Friday, October 17, 2025 (9:30am; Virtual)

1. New Academic Program Proposals (Action)
2. Notification of Awards: USM Regents Scholars Program, AY 2024-2025 and Wilson H. Elkins Professorships, FY25 (Information)
3. Strategic Plan Update (Information)

Wednesday, December 3, 2025 (9:30am; Virtual)

1. New Academic Program Proposals (Action)
2. Policy on Appointment Rank and Tenure of Faculty – Section C7 Revisions (Action)
3. Meet and Confer Policy Revisions (Action)
4. International Students (Information)

Thursday, January 29, 2026 (9:30am; Virtual)

1. New Academic Program Proposals (Action)
2. Report: Workload of the USM Faculty – Academic Year 2023-2024 (Information)

~~~~~~~~~~Closed Session~~~~~~~~~~~~~~

3. Board of Regents Faculty Awards Recommendations (Action)
4. Honorary Degree Nominations (Action)

Wednesday, April 8, 2026 (9:30am; Virtual)

1. New Academic Program Proposals (Action)
2. Results of Periodic (7-Year) Reviews of Academic Programs (Information)
3. Campus Crime Reports (Information)
4. New Program 5-Year Enrollment Review (Information)

~~~~~~~~~~~Closed Session~~~~~~~~~~~

5. Board of Regents Student Excellence Scholarships (Action)

Tuesday, June 2, 2026 (9:30am; Virtual)

1. New Academic Program Proposals (Action)
2. Diversity, Equity, and Inclusion – 2025 Cultural Diversity Reports and Beyond (Action)
3. 2025-2026 EPSLS Agenda Brainstorming (Information)

Topics that we would like to cover but not sure where they fit in yet: prison education, AI - NASH Google Project + BoodleBox, teacher preparation, digital accessibility

Education Policy and Student Life and Safety Work Plan

FY 2025 – 2026

Activity	Sept	Oct	Dec	Jan	Apr	Jun	Notes
Certification of EPSLS Committee Charge	X						
Tentative Annual Agenda	X						
Notification of Awards: Elkins Professors and Regents Scholarships		X					
Report on Academic Program Actions Delegated to Chancellor	X						
Faculty Workload Report				X			
BOR Faculty Awards Recommendations				X			
Honorary Degree Nominations				X			
Results of Periodic Reviews of Academic Programs					X		
BOR Student Excellence Scholarships					X		
Cultural Diversity Reports						X	
Agenda Brainstorming						X	
New Academic Program Proposals	X	X	X	X	X	X	

X – Scheduled
X – As Needed