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**Board of Regents
Committee on Education Policy and Student Life**

**Tuesday, May 5, 2020
9:30 a.m.**

**Zoom Details to be Provided to Committee
Public Listen-Only Access: 1-443-353-0686; Conference ID - 719 062 281**

Public Session Agenda

Action Items

- I. New Academic Program Proposals
 - a. [Bowie State University: Master of Education in Culturally-Responsive Teacher Leadership](#)
 - b. [Frostburg State University: Bachelor of Science in Life-Cycle Facilities Management](#)
 - c. [Salisbury University: Bachelor of Science in Integrated Science](#)
 - d. [Towson University: Master of Science in Athletic Training](#)
 - e. [University of Baltimore: Bachelor of Science in Cyber Forensics](#)
 - f. [University of Maryland, Baltimore: Master of Science in Global Health](#)
 - g. [University of Maryland, Baltimore: Master of Science in Vulnerability and Violence Reduction](#)

Information Items

2. [Update: Diversification of the Faculty](#)
3. [2020-2021 EPSL Agenda Brainstorming](#)

Action Item

4. [Motion to Adjourn](#)



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

TOPIC: Bowie State University: Master of Education in Culturally-Responsive Teacher Leadership

COMMITTEE: Education Policy and Student Life

DATE OF COMMITTEE MEETING: Tuesday, May 5, 2020

SUMMARY: Bowie State University (BSU) proposes to offer the Master of Education in Culturally Responsive Teacher Leadership program in response to the workforce demands for culturally-responsive, teacher-leaders within the State of Maryland, particularly for the districts with the most culturally and linguistically diverse students. The Glossary of Education Reform defines teacher-leaders as “teachers who have taken on leadership roles and additional professional responsibilities.” Furthermore, teacher-leaders are defined as teachers who lead within and beyond the classroom, influence others toward improved educational practice, and identify with and contribute to a community of teacher-leaders.

The proposed Culturally Responsive Teacher Leadership program is aligned with the National Education Association Teacher-Leader Model Standards and Maryland State Department of Education Standards for Preparing Educators for High Poverty/Culturally and Linguistically Diverse School expectations. The proposed program will be supported in part by funding from a five-year US Department of Education Teacher Quality Partnership grant to develop a teacher-leader program. The recipients of the Teacher Quality Partnership grant will be part of a cohort of up to 20 students each year for the next five years; serving approximately 100 teacher-leaders from the state’s high priority school districts including Prince George’s County, Baltimore City, and three rural counties. The program will be a collaboration between departments in BSU’s College of Education – Educational Leadership and Teaching, Learning, and Professional Development.

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 fees revenue.

CHANCELLOR’S RECOMMENDATION: That the Committee on Education Policy and Student Life recommend that the Board of Regents approve the proposal from Bowie State University to offer the Master of Education in Culturally-Responsive Teacher Leadership.

COMMITTEE RECOMMENDATION:

DATE: May 5, 2020

BOARD ACTION:

DATE:

SUBMITTED BY: Joann A. Boughman 301-445-1992

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Aminta H. Breaux, Ph.D.

President

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March 27, 2020

Jay A. Perman, MD
Chancellor
University System of Maryland
3300 Metzert Road
Adelphi, Maryland 20783-1690

Dear Chancellor Perman,

Please find enclosed a proposal to offer a new program at Bowie State University, Master of Education in Culturally Responsive Teacher Leadership (HEGIS 089900/CIP 131299).

Bowie State University developed the Master of Education in Culturally Responsive Teacher Leadership program proposal in response to the changing roles of teachers and the growing body of research that demonstrates the success of culturally-responsive practices on student outcomes behavior to attendance and to grade point average. The proposed program is unique in that it provides current K-12 teachers with a skill-set in culturally responsive teaching and learning practices and prepares them to be teacher leaders within their school.

Initial support for the program will be from a five-year US Department of Education Teacher Quality Partnership grant supporting approximately 100 teachers from the state's high priority school districts. As part of the grant, teachers will receive scholarships, mentoring, and coaching. The expectation is that teacher-leaders from this program will collaborate with the districts' most accomplished teachers and National Board-Certified Teachers (NBCTs) to increase the numbers of culturally-responsive teachers for the districts with the most culturally and linguistically diverse students.

We respectfully request the USM Board of Regent's consideration of this proposal.

Sincerely,

A handwritten signature in black ink that reads "Aminta H. Breaux". The signature is written in a cursive style.

Aminta H. Breaux, Ph.D.
President

Cc: Dr. Judith Kirkpatrick, Interim Provost and Vice President for Academic Affairs
Dr. Joann Boughman, Senior Vice Chancellor, USM
Dr. Antoinette Coleman, Associate Vice Chancellor, USM
Dr. Wilbur Parker, Department Chair, Educational Leadership
Dr. Lynne Long, Department Chair, Teaching, Learning and Professional Development
Dr. Davenia Lea, Associate Professor, Teaching, Learning and Professional Development
Ms. Gayle Fink, Office of Planning, Analysis and Accountability

UNIVERSITY SYSTEM OF MARYLAND INSTITUTION PROPOSAL FOR

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

Bowie State University
Institution Submitting Proposal

Culturally-Responsive Teacher Leadership
Title of Proposed Program

Master of Education
Award to be Offered

Fall 2020
Projected Implementation Date

089900
Proposed HEGIS Code

13.1299
Proposed CIP Code

Educational Leadership and
Teaching Learning, Professional Development
Department in which program will be located

Dr. Wilbur Parker
Dr. Davenia Lea
Department Contact

301-860-3138
301-860-3127
Contact Phone Number

wparker@bowiestate.edu,
dlea@bowiestate.edu
Contact E-Mail Address



Signature of President or Designee

03/27/2020

Date

Bowie State University
Master of Education in Culturally-Responsive Teacher Leadership New Program Proposal

A. Centrality to Institutional Mission and Planning Priorities

Bowie State University (BSU) is a comprehensive university that provides 21st-century learners with a strong foundation for success with a well-rounded academic experience, an inclusive environment, and hands-on learning opportunities. Building on its rich legacy as a training ground for teachers since 1865, the university is committed to providing access to a high-quality education and cultivating emerging leaders who are prepared to succeed in a changing, global society.

The proposed master's degree program in Culturally-Responsive Teacher Leadership (M.ED) contributes to the university's mission by empowering "a diverse population of students to reach their potential by providing innovative academic programs" and by supporting Maryland's workforce and economy. The Masters of Education in Culturally-Responsive Leadership contributes to the achievement of a of Bowie's *FY 2019 – FY 2024 Racing to Excellence Strategic Plan*, specifically Goal 1 Academic Excellence, Objective 1.1 High-demand, innovative academic programs. The College of Education, Department of Educational Leadership will provide the oversight for the proposed program. As the university's founding discipline, the College of Education continuously improves its initial and advanced certification programs and non-certification programs to meet the professional demands of today's teaching workforce as well as the students it serves.

The proposed Culturally-Responsive Teacher Leadership program is rooted in evidenced and research-based theories and practices in the areas of culturally-responsive pedagogy, distributed leadership, as well as effective 21st-century teaching and learning practices. This program is grounded in sociocultural and shared leadership theories, as well as essential pedagogies and approaches to teaching and learning. In addition, the proposed program is aligned with the National Education Association (NEA) Teacher-leader Model Standards and Maryland State Department of Education (MSDE) Standards for Preparing Educators for High Poverty/Culturally and Linguistically Diverse Schools.

The overall goal of the program is to increase the numbers of culturally-responsive teacher-leaders within the state of Maryland, particularly for the districts with the most culturally and linguistically diverse students. The proposed program will be supported in part by funding from a five-year US Department of Education Teacher Quality Partnership grant to develop a teacher-leader program. The recipients of the Teacher Quality Partnership grant will be part of a cohort of up to 20 students each year for the next five years; serving approximately 100 teacher-leaders from the state's high priority school districts. As part of the grant, teachers will receive scholarships, mentoring, and coaching. Teacher-leaders from this program will also collaborate with the districts' most accomplished teachers and NBCTs – National Board-Certified Teachers. Tuition revenues will support the program after Year 5 with anticipated student enrollment growing by five students not being funded by the grant each cohort after Year 2. If the program's revenue does not exceed expenses after five years, the university would then reevaluate the continuation of the program. If a decision was made to discontinue the program all students enrolled would have the opportunity to complete and new enrollment would not be permitted.

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

Today the nation's public educational system is feeling the weight and burden of severe budget cuts, the impending retirement of an estimated three million teachers by the end of this decade (The Condition of Education Report, NCES, 2018) in addition to the ongoing challenge of teacher shortages, most specifically in both urban and rural schools. Additionally, the United States is experiencing the largest generation of immigrant children the nation has seen. All of this increases the risk of leaving behind those who have the least voice, the least access, and the lowest standard of achievement in the school system; thus, the importance of having highly-qualified, culturally-responsive, 21st-century teachers able to address these challenges within the classroom, the school, and the community.

According to Secretary Margaret Spellings, "Nothing helps a child learn as much as a great teacher," (2014). Yet despite the challenges faced and the research support for the need of highly-qualified teachers in the neediest schools, the inequitable distribution of well-qualified teachers in the United States continues with the less qualified teachers serving in schools with greater numbers of low-income and minority students. Studies in state after state have found that students of color in low-income schools are three to 10 times more likely to have unqualified teachers than students in predominantly white schools.

These findings support the need for highly-qualified, culturally-responsive practitioners. A growing body of research confirms that culturally-responsive practices have moved the needle on a host of student outcomes, from behavior to attendance to grade point average (Muniz, 2018). Culturally-responsive teachers play a crucial role in mediating the social and academic curriculum. Considering how to approach curriculum and incorporating varying paradigms in the ways that curriculum is presented and experienced is an important part of culturally-responsive teaching (Gay, 2018).

Additionally, culturally-responsive teachers are concerned about the ways that instruction is facilitated. When classrooms are organized into communities that are designed to encourage academic and cultural excellence, students learn to facilitate their own learning as well as that of their peers (Kozleski, 2010). Through proper training, culturally-responsive teachers learn to bridge the gap between instructional delivery and diverse learning styles as well as establish continuity between how diverse students learn and communicate and how the learning community approaches teaching and learning (Darling-Hammond, 2019).

In addition to having teachers who employ culturally-responsive practices, the research additionally supports the need for a more diverse teacher workforce. According to the research, teachers of color tend to provide more culturally relevant teaching and better understand the experiences of students of color. Additionally, they tend to have more positive perceptions of students of color—both academically and behaviorally. For example, a recent study found that African American teachers are less likely than white teachers to perceive African American students' behavior as disruptive (Santa Barbara, CA: University of California Department of Economics, 2015). Additionally, a significant positive effect on the standardized test scores of students of color when they are taught by teachers of color was found when Florida researchers analyzed a massive data set of about 3 million students and 92,000 teachers over seven years. The results indicated a positive effect in reading and math scores when African American

Bowie State University
Master of Education in Culturally-Responsive Teacher Leadership New Program Proposal

students were taught by African American teachers. For students who performed at the lowest levels, the effect of having a teacher of the same race was even larger (Egalite, Kisida, Winters, 2015). The lack of diversity in the teaching profession, combined with these differing interpretations of student ability and behavior, may partially explain why students of color are suspended or expelled from all levels of school at disproportionate rates. (Available at <http://ocrdata.ed.gov/Downloads/CRDC-School-Discipline-Snapshot.pdf>. 2014).

While increasing the number of culturally-responsive teachers within the workforce will significantly contribute to the overall achievement of learners, particularly learners who are disadvantaged, schools continue to become more progressively complex with rising standards for academic performance and increased levels of accountability. This has placed too much responsibility on principals as the sole providers of leadership (Jensen, 2017). As school reform and restructuring continues, in addition to providing culturally-responsive learning environments, the inclusion of teachers in leadership roles and activities is a critical component for the process of change. Thus, the nurturing of teachers as leaders is also fundamental to effective school improvement (Darling-Hammond, Flook, Cook-Harvey, Barron, Osher, 2019).

To this end, The [Glossary of Education Reform](#) defines teacher-leaders as “teachers who have taken on leadership roles and additional professional responsibilities.” Furthermore, teacher-leaders are defined as teachers who lead within and beyond the classroom, influence others toward improved educational practice, and identify with and contribute to a community of teacher-leaders (Fairman and MacKenzie, 2014). In any given leadership role, the teacher-leader acts as an agent of change, advocating school improvement through professional development, intelligent curriculum design and data-based decision-making — as well as community outreach, engagement and positive networking. Teacher leadership goes beyond the classroom walls. To be a teacher-leader one must lead more than his/her students and conduct leadership work outside of his/her classroom (Hunzicker, 2012). Teacher-leaders also support professional learning in their schools, which could be in the form of leading professional learning communities, conducting formal PD, or assisting other teachers in classrooms (Jensen, Downing, Clark, 2017). Moreover, teacher-leaders are involved in policy and/or decision-making at some level (Wenner Campbell, 2017). Teacher-leaders additionally work toward improvement and change for the whole school organization (Bereiter Scardamalia, 2014). But with all of these varying activities and roles, the ultimate goal of teacher-leadership is improving student learning and success (Carpenter Sherretz, 2012).

As an HBI, Bowie State University’s initial teacher preparation program, specifically the proposed Culturally-Responsive Teacher Leadership M.Ed. program with an emphasis on 21st-century, culturally-responsive teaching and learning practices, is uniquely positioned to contribute to the national teacher shortage of highly-qualified teachers of color. The majority of Bowie State students are of color (87%) and approximately 30% are first-generation college attendees. Additionally, many Bowie State graduate students work in the most challenged school systems within Prince George’s County, Baltimore City and/or Washington, DC.

The 2017-2021 State Plan for Postsecondary Education: Student Success with Less Debt Strategy 4 continues the focus on equal educational opportunities for Marylanders. Under this strategy, the plan

Bowie State University
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calls for continued support for Historically Black Colleges and Universities. The proposed program is well aligned to the following goals, strategies and action items of the 2017- 2021 Maryland State Plan for Postsecondary Education: SUCCESS: Promote and implement practices and policies that will ensure student success – Strategy 4, 5, 6 and 9. The proposed program will be offered in an accelerated format in order to meet the diverse learning needs of the students as well as to provide access to the non-traditional, working adults. The proposed program will also provide extensive professional development to the faculty and instructors of the program, ensuring that they are equipped with the knowledge, skills and dispositions needed to model, deliver and support quality 21st century, culturally-responsive teaching and leadership practices. Additionally, an expected outcome of the program is to identify/quantify “best practices” used within Bowie State University to reach and educate diverse students who are economically and/or socially challenged in order to serve as a model for other higher education institutions as well as for the teacher-leaders in the program.

C. Quantifiable and reliable evidence and documentation of market supply demand in the region and State:

Widely publicized reports have generated national attention of teacher shortages. However, teacher shortages vary across and within states with there being well documented shortages in some states while other states graduate more teachers than are employed locally (e.g., New York). However, one trend that appears to remain consistent across the nation is that suburban school districts have far less trouble hiring qualified and experienced candidates while urban and rural schools struggle to keep up (McKenna, 2015).

Specifically looking at Maryland, beginning in 2010, student enrollment in teacher education programs has steadily declined and statewide enrollment in MA education programs dropped 19% between 2010 and 2014 (Janulis, 2017). School districts that are unable to fill an open position with a certified teacher may fill those positions on a case-by-case basis by requesting a two-year conditional certificate for a potential hire who met some but not all of the certification requirements. This pathway represented roughly 10% of total hires in 2012 and 2013 (MSDE, 2014). Since districts cannot leave a classroom without a teacher the rate of conditionally certified teachers could be considered a crude indicator of teacher shortages. In Maryland, two urban districts (Baltimore City, and Prince George’s County) and three rural districts (Dorchester, Charles, and Caroline) had a higher percentage of conditionally certified teachers compared to other districts in the state (MSDE 2008-2016). Additionally, there is also a critical shortage of teachers of color and a greater shortage of teacher-leaders of color (Learning Policy Institute, 2018).

This program is in a direct response to assist in meeting the needs of the local school system in which faculty serve, Prince George’s County Public Schools (PGCPS). As indicated above, PGCPS has one of the highest numbers of conditional teachers in the classrooms, with some of the most vulnerable students across the State of Maryland (Maryland Teacher Staffing Report 2016-2018). Additionally, the percent of children below the age of 18 identified as living in poverty is 11% (Census, 2017). Ninety-six percent of the students are classified as non-white; 23% of the students are classified as Limited English Proficient (LEP); 61% receive Free and Reduced Meals (FARMS); and 41% of the schools are classified as Title I schools (2017 Maryland Report Card).

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In partnership with PGCPs, the faculty members are working to provide needed courses and programs that support and prepare conditional status teachers with the necessary qualifications and degrees needed so they may better support and educate the students of PGC.

This program is also a direct response to the statewide need of highly-qualified teachers of color who are positioned to lead school reform, who are equipped with the knowledge, skills and dispositions of master teachers, and who can give the neediest children the greatest advantages of culturally-responsive 21st-century education. (Source: <https://mwejobs.maryland.gov>)

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D. Reasonableness of Program Duplication:

While several institutions have educational leadership master degree programs, no other institution in the State of Maryland have a Teacher Leadership master's degree program.

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

The proposed program continues Bowie State University's founding commitment to provide access and opportunity to diverse populations. The US Department of Education award is aligned with Bowie's founding commitment to teacher education.

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

Bowie State University enrolled over 6,100 students in fall 2019 - 85 percent of whom identified as an under-represented minority group. In fall 2019, 221 full-time faculty and over 250 appropriately-credentialed faculty taught this diverse student body. For the past five years, Bowie has graduated over 1,025 students annually with three quarters receiving a bachelor's degree, 24 percent master's and 1 percent with a doctoral degree. In the fall of 2019, the College of Education had 28 full-time and 70 part-time appropriately-credentialed faculty teach over 800 students that reflected a similar race/ethnic background as the university population. The proposed program will also contribute to the rich legacy of BSU in preparing culturally-diverse students.

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

1. In response to the Teacher Quality Partnership grant, the Educational Leadership Department of Bowie State University proposed the development of a Teacher Leadership Graduate Degree Program in order to fill the gap of having highly-qualified teacher-leaders in some of the most challenged areas in the State of Maryland. Additionally, the College of Education's self-study led to the determination that the viability and sustainability of the Elementary and Secondary Education Graduate programs would be improbable if they were to continue on the same path. Enrollment for both programs had been consistently low for the past five years. Also, upon review of the graduate programs, the course format of 16-week, face-to-face instruction proved to be prohibitive to many adult learners, and the program's content/courses offered were not being offered in a systematic manner and were not aligned to a conceptual framework or organizing theme. This self-study of the graduate programs, in addition to the receipt of the Teacher Quality Partnership Grant (TQP), led to the proposal for the development of a new graduate (advanced) program in Teacher Leadership that would be a collaboration between two departments – Teaching, Learning, and Professional Development (TLPD) and Educational Leadership.

The current coordinator of the Elementary Education Graduate Program, Dr. Davenia Lea, in collaboration with Dr. Wilbur Parker, chair of the Educational Leadership Department, led the charge of a) reviewing the current trends, b) determining the current needs of local school

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systems, c) researching best practices, and d) coordinating the effort to design the newly-proposed program. The members of the College of Education Graduate Council have been instrumental in reviewing the data and evidence, making recommendations and providing valuable feedback, reviewing the program design as well as the new courses, and assisting in the preparation of the proposal. Dean Cosmas Nwokeafor who leads the Graduate School will be responsible for graduate admissions and administrative functions related to all Bowie State University graduate programs.

As previously stated, the proposed program will be a collaborative endeavor between two departments. In order to maximize resources from the Teaching, Learning and Professional Development (TLPD) Department, the Elementary and Secondary Education Graduate programs will no longer be offered and the Program Coordinator of the Secondary Education Program, Dr. Akeda Pearson will serve as the co-coordinator of the proposed program. Additionally, TLPD faculty will develop and instruct courses. The Educational Leadership Program will also provide program leadership via a co-coordinator and the development and instruction of courses.

Responsibilities of the co-coordinators will include: working with the graduate school to admit students; serving as the initial point of contact for the students; organizing and leading recruiting efforts; serving as the academic advisor for the students; identifying potential adjunct instructors and communicate this information to the department chairs; assisting in the program evaluation processes; representing the program on the Graduate Council and collaborating with school districts to provide teacher coaching and mentoring from accomplished teachers and National Board Certified Teachers (NBCTs).

The Department of Educational Leadership will be the lead for the program that will collaborate with the Department of Teaching, Learning, and Professional Development in the College of Education. Bowie State University currently offers master's programs focused on advanced certifications and a doctoral program in Educational Leadership. Departmental faculty members are diverse in gender, race, and ethnic and educational backgrounds. Advanced certification programs are accredited by the Council for the Accreditation of Educator Preparation (CAEP).

The proposed program is designed to prepare scholars and practitioners to address a number of essential questions: 1) How can instructional and leadership practices promote **equity, access and inclusivity** in the building of culturally-responsive learning communities? 2) How can teacher-leaders in collaboration with the administration organize curriculum, instructional practices and school communities to support and foster the **learning and achievement** of the diverse 21st-century student? 3) How do **data driven practices** influence the priorities of teachers, administrators and students and how can such practices be designed to support, rather than inhibit the accomplishment of educational aims? 4) What **supports and resources** are needed to strengthen culturally-responsive school programs and how can they be accessed? 5) How can teachers, administrators, families and communities **work collaboratively** to support student learning and achievement? The proposed program will help graduate students learn how to think about such questions and how to develop the specialized understanding and skills

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needed to improve educational practice and meet the needs of students in Maryland’s pre-K-12 schools.

2. Appendix C demonstrates how the proposed program is aligned with the National Education Association (NEA) Teacher-leader Model Standards and Maryland State Department of Education (MSDE) Standards for Preparing Educators for High Poverty/Culturally and Linguistically Diverse Schools expectations (<http://www.marylandpublicschools.org/about/Documents/DEE/PreparingEducatorsHighPovertyCulturallyLinguisticallyDiverseSchools070914.pdf>).

The specific program objectives for the M.ED in Culturally-Responsive Teacher Leadership are below:

- Demonstrate knowledge of education theory, effective curriculum, instruction and assessment practices, and intercultural competence in addressing civic, social, environmental and economic issues
 - Demonstrate instructional practices reflective of sound knowledge of content, educational theories, and evidenced-based instructional strategies
 - Demonstration of advanced research skills through written documents
 - Demonstrate knowledge of and the practice of ethics and professionalism under all circumstances.
 - Demonstrate proficiency as a reflective practitioner through interpersonal skills and oral and written language skills.
3. The proposed program will follow the College of Education student learning outcomes assessment protocols that support CAEP accreditation. Assessment results are compiled by program faculty each semester and managed by the Program Chair and the Assessment Coordinator. The data is required to be reported to the BSU’s Center for Academic Programs Assessment each year for review by internal peer evaluators. The full academic program review occurs every seven years in accordance with internal requirements and those of the University System of Maryland. Below is the program goal assessment plan for the proposed program. Faculty members are evaluated annually according to parameters in the Faculty Handbook and BSU Policies and Procedures. Student course evaluations will be administered each semester by the Office of Planning, Analysis and Accountability. Course evaluation results are shared with deans and department chairs to inform course and instructional improvements.

Program Goals	Expected Learning Outcomes	Courses and/or experiences in which this outcome can be achieved	Instruments/Frequency
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Program Goals	Expected Learning Outcomes	Courses and/or experiences in which this outcome can be achieved	Instruments/Frequency
To master the elements of advanced Instructional Leadership	Demonstrate knowledge of content, educational theories, and evidenced-based instructional strategies. Demonstrate the ability to think systemically in order to manage and monitor student learning. Create and sustain a network of improvement-communities for increased student learning.	CRTL 510 Culturally-responsive Knowledge, Pedagogy, Discourse and Practices CRTL 550 Culturally-responsive Curriculum, Instruction and Assessment Practices CRTL 650 Using Data and Research to Improve Practice	CRTL 510: Autobiographical Sketch and Personal Framework Reflection CRTL 550: Design a 21st-century, Culturally-responsive Assessment CRTL 650: Performance-based Project
To master the elements of Organizational Leadership	Demonstrate practices that support building culturally-responsive school cultures with specific skillsets for managing groups, teams and networks to promote change in the most culturally and linguistically diverse learning communities.	CRTL 530 Teacher Leadership for Student Learning CRTL 660 School and Community Relations	CRTL 530: Case Study CRTL 660: Individual Presentation
To master principles of Evidence Based-Data Driven-Research Leadership	Demonstrate the production of data to analyze, synthesize, and critique evidence of effect teaching, leading, and learning. Use various (re) sources of evidence and data to produce dialogue and discourse for teacher leadership growth.	EDUC 706: Introduction to Research EDUC 554: Seminar in Curriculum CRTL 650 Using Data and Research to Improve Practice	EDUC 706: Literature Review EDUC 554: Capstone Project/action research CRTL 650: Problem and Data Analyses
To master principles of Public Leadership	Demonstrate skills for advocating for the profession as well as underserved communities. Demonstrate skills for serving as provocateurs of equity at the local, district and national levels.	CRTL 520 Issues Related to Diversity, Equity and Access in Education CRTL 670 Dynamics of Group Behavior CRTL 690 Seminar in School Administration	CRTL 520: Education Equity Plan and Personal Identity Analysis ESAS 770: Teacher Leadership Model Presentation CRTL 690 Capstone Project

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4. To be admitted into the proposed program, an applicant must hold a bachelor's degree from a regionally-accredited institution and have a cumulative grade point average of 2.5 or better (on a 4.0-point scale). In addition, the Teacher Leadership program requires that all applicants hold a current Professional Certificate certifying eligibility to teach in early childhood, elementary and/or secondary education and be currently working in an educational setting and have at least two years of teaching experience.

The proposed master's program is 30-credit hours in length consisting of nine, three-credit courses and a three-credit culminating capstone experience. Course descriptions are included in Appendix A. A listing of courses is provided below, and courses specifically designed for the program are indicated in **bold**.

Core Courses:

Course #	Course Title	Credit Hours
CRTL 510	Culturally-responsive Knowledge, Pedagogy, Discourse and Practices	3
CRTL 520	Issues Related to Diversity, Equity and Access in Education	3
CRTL 530	Teacher Leadership for Student Learning	3
CRTL 540	Introduction to Research (cross- listed with EDUC 706)	3
CRTL 550	Culturally-responsive Curriculum, Instruction and Assessment Practices	3
CRTL 650	Using Data and Research to Improve Practice	3
CRTL 660	School and Community Relations (cross-listed with ESAS 704)	3
CRTL 670	Dynamics of Group Behavior (Cross-listed with PSYC 739)	3
CRTL 680	Instructional Coaching and Mentoring for Student Learning	3
CRTL 690	Seminar in School Administration (Capstone Project) (cross-listed with ESAS 825)	3
Total		30

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A sample program of study is below:

Sample Program of Study

<p>Semester 1 CRTL 510: Culturally-responsive Knowledge, Pedagogy, Discourse and Practices (1st 8 weeks) CRTL 540 Introduction to Research (cross- listed with EDUC 706) (1st 8 weeks) CRTL 530: Teacher Leadership for Student Learning (2nd 8 weeks) CRTL 520: Issues Related to Diversity, Equity and Access in Education (2nd 8 weeks)</p>	<p>Semester 2 CRTL 550: Culturally-responsive Curriculum, Instruction and Assessment Practices (1st 8 weeks) CRTL 650: Using Data and Research to Improve Practice (1st 8 weeks) CRTL 660: School and Community Relations (2nd 8 weeks)</p>
<p>Semester 3 CRTL 670: Dynamics of Group Behavior (1st 8 weeks) CRTL 680: Instructional Coaching and Mentoring for Student Learning (2nd 8 weeks) CRTL 690 – Seminar in School Administration (16 weeks)</p>	

5. Not applicable.
6. The proposed program does not lead to any advanced teacher certifications.
7. Not applicable
8. As previously stated, the Graduate School is responsible for graduate admissions and administrative functions related to all Bowie State University graduate programs. The graduate catalog is online and contains all of the pertinent information for the BSU policies as well as for each individual graduate program. Additionally, within the education department, each program has an assigned program coordinator who serves as the advisor and point of contact for the students. A program orientation will be held at the beginning of each semester for new students and a program handbook will be provided. Additionally, the graduate school and programs have the support of the BSU financial aid office, as well as all other student support services on campus.
9. The Dean of the Graduate School has committed to supporting the development and implementation of the proposed program. A meeting will be convened with the BSU marketing director to conduct a needs analysis and to delineate a marketing strategy. Additionally, the

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program coordinators will play a critical and active role in marketing the program. They will work closely with the local school systems in order to promote the program, and they will attend various recruitment fairs and informational sessions. The TQP grant will also support the marketing efforts in the amount of \$25,000.

H. Adequacy of Articulation

Not Applicable

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

Current College of Education full-time faculty will support the proposed program. Drs. Davis, Lea and Parker have direct professional and scholarship achievements related to culturally-responsive theory and pedagogy and public school experience. See Appendix B.

Funding is available for all full-time faculty to receive support for ongoing professional development and continuing education. In addition, the institution provides faculty development events throughout the year.

Courses in the program will be delivered in an accelerated eight-week format. Offering a variety of delivery methods will allow faculty to meet the needs of diverse learning styles. Course instructional strategies will be interactive and will include a variety of hands-on experiences with concrete and virtual experiences. The courses will also include opportunities for guided discovery, research, exploration, investigation and values clarification through field-based experiences inclusive of observing, listening, questioning, reflecting, demonstrating and practicing. Faculty who teach in the program will be offered continuing education in evidenced-based, effective pedagogy through BSUs Center of Excellence in Teaching and Learning Office (CETL).

BSU utilizes the learning management system "Blackboard" which houses full online courses in addition to serving as a mode of communication for faculty and students. A minimum presence in Blackboard is advised for all courses to inform students about: (a) course syllabus; (b) attendance; (c) grades and due dates in Grade Center (d) instructor contact information and office hours and (c) hours of availability so that students so students can make appointments via iCAN. Faculty are experienced in the use of this LMS. BSU also has an office of Academic Computing and Online Course Support that provides support for technical needs of faculty and students in a timely basis, The Office of Academic Computing and Online Course Support also provides continuing education opportunities through face-to-face offerings as well as online training modules available to faculty and students 24 hours a day through web access. Additionally, faculty are able to gain certifications in online course development and instruction.

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

Students enrolled in the proposed program will have access to the BSU library's online databases, the BSU main campus library resources. Additionally, students will have the ability to have items delivered directly to BSU from any of the other USM libraries. Students will also have access to the resources of a dedicated curriculum laboratory for all education majors. The curriculum laboratory is housed on the

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second floor of the Thurgood Marshall Library Room 2210. The laboratory supports the mission of excellence in teaching, learning and research of Bowie State University. The diverse materials found here, support instruction in professional development and teacher education of undergraduate, graduate students. These are both in print and non- print format. Education faculty uses the laboratory, which also houses the SMART Classroom facility, for teaching and demonstrations on electronic pedagogy. Also, the library has a budget dedicated for education programs in order for faculty to order needed texts, DVDs and other needed curricular resources.

K. Adequacy of Physical Facilities, Infrastructure and Institutional Equipment (as outlined in COMAR 13B.02.03.13)

The proposed program will be a part of the current graduate programs in the College of Education which is housed in the James E. Proctor Building (JEP) where the majority of courses are taught. The JEP was constructed in the year 2000 with 58,000 net assignable square feet of space, which includes:

- Ten classrooms each equipped with a whiteboard, computer, projector, drop-down screen, and other multimedia
- Seven 25-seat computer labs
- Two state-of-the-art 40-seat classrooms
- Two large-tiered multi-media classrooms (120 and 250 person capacity)
- Teaching observation rooms
- A student lounge
- A large 20-seat conference room
- Three seminar rooms
- PRAXIS lab
- Conference rooms and break rooms, and
- Faculty and staff offices.

All full-time faculty members have individual offices while most adjunct faculty members share a common office. Graduate assistants and student workers also utilize and share office space. In addition, students will also have access to university facilities outside JEP. These include four shared computer labs and classrooms with internet capability in the Thurgood Marshall Library basement and in other academic buildings throughout the campus in addition to the BSU Student Center that houses the bookstore, the cafeteria, etc.

L. Adequacy of Financial Resources

The proposed program will be supported by funding from a five-year US Department of Education Teacher Quality Partnership grant to develop a teacher-leader program. The students will be part of a cohort of up to 20 students each year for the next five years; serving approximately 100 teacher-leaders from the state's high-priority school districts. Tuition and revenue for the first five years will assure that at least a minimum of 10 students will be enrolled over the next five years. Tuition revenues will support the program after Year 5 with anticipated student enrollment growing by five students not being funded by the grant each cohort after Year 2. If the program's revenue does not exceed expenses after five years, the university would then re-evaluate the continuation of the program.

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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)	69,719.58	123,104	211,330	272,088	336,301
a. Number of F/T Students	0	0	0	0	0
b. Annual Tuition/Fee Rate	0	0	0	0	0
c. Total F/T Revenue (a x b)	0	0	0	0	0
d. Number of P/T Students	7	12	20	25	30
e. Credit Hour Rate	\$553.33	569.93	587.03	604.64	622.78
f. Annual Credit Hour Rate	18	18	18	18	18
g. Total P/T Revenue (d x e x f)	69,719.58	123,104	211,330	272,088	336,301
3. Grants, Contracts Other External Sources	0	0	0	0	0
4. Other Sources	0	0	0	0	0
TOTAL (Add 1 – 4)	69,719.58	123,104	211,330	272,088	336,301

1. Reallocated Funds: N/A
2. Tuition and Fees Revenue: The goal is to have at least seven students enrolled in the first year/Fall of 2020 with a steady increase each year. This is based on the interest as well as the rate of increase of the other graduate programs. The annual credit hour and fee rate is based on instate tuition. This chart also factors in a 3% tuition increase every year.
3. Grants and Contracts: N/A
4. Other Sources: N/A

TABLE 2: PROGRAM EXPENDITURES:					
Expenditure Categories	Year 1	Year 2	Year 3	Year 4	Year 5
1. Faculty (b + c below)	0	0	2,835	9,670	5,940
a. Number of FTE (adjuncts)	0	0	.25 (1 adjunct)	.50 (2 adjuncts)	.50 (2 adjuncts)
b. Total Salary	0	0	2,625	5,250	5,500

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c. Total Benefits	0	0	210	420	440
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	2,835	9,670	5,940

1. Faculty: This includes the wage and fringe benefits for one adjunct in year three and two adjuncts in years 4 and 5 (calculated at the BSU current adjunct pay of \$2,500 per course and 8% fringe benefits = \$2700 per course with a 3% increase in years 4-5) to support the projected enrollment growth. No other full-time faculty are needed at this time, as it is proposed that two BSU graduate programs will be dormant and those two faculty will serve to coordinate the proposed program. Additionally, 7 of the 10 courses are already being offered and taught.

2. Admin. Staff: N/A

3. Support Staff: N/A

4. Technical Support and Equipment: N/A

5. Library: N/A

6. New or Renovated Space: N/A

7. Other Expenses: N/A

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

Courses are evaluated by students each semester through an online evaluation tool. The data is shared with course instructors as well as the department chairpersons. The department chairs work with the program coordinators to review the data with faculty, to provide professional development and other resources to faculty as needed, and to also guide course review and revisions.

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The College of Education has a dynamic system of evaluation which serves to inform continuous improvement based on data and evidence collected, maintained, shared and analyzed. The data informed processes guide the program's self-assessment that is context-specific, evidence-informed, and outcomes-focused. This process provides a focus through which the program evaluates the extent to which it is meeting state, university, program and school system expectations, delivering on priorities, implementing strategic goals and initiatives, improving programs, and measuring the impact of the programs on P-12 student learning and achievement.

The assessment system is comprised of multiple measures and steps that allow the EPP to monitor candidate progress and complete achievements. These decision points are layered with evaluations whereby candidates are assessed in relation to their prior academic preparation, current learning of content knowledge, demonstrated skills, and professional dispositions. Assessment methods include content knowledge, course-embedded assessments, and grades in major program courses, self-reflections, and academic performance indicators. Data is gathered from appropriate stakeholders, such as P-12 and administrators, course instructors, and students twice during the academic year.

The assessment system is comprised of several technologies that help to collect, store, and analyze data. The technologies used include Taskstream database, which provides a mechanism to electronically record program data, retrieve data from the institution's student information system PeopleSoft, and to generate reports on these data. After the fall and spring semester, the data is downloaded and disaggregated for program review. The data is used to inform, modify, and evaluate the program's operational effectiveness and decision-making regarding instructional practices.

N. Consistency with the State's minority student achievement goals (as outlined in COMAR 13B.02.03.05 and in the State Plan for Postsecondary Education).

As Maryland's first Historically Black Institution, Bowie State University is committed to providing access to high quality higher education to African-Americans and other under-represented minorities. The goals established in the University's Racing to Excellence FY 2019 – FY 2024 Strategic Plan support student achievement and long-term viability of the institution and align with the goals in the *2017-2021 State Plan for Postsecondary Education: Student Success with Less Debt*. Specifically, Bowie continues to support educational opportunity for Marylanders (Success, Strategy 4), engage in a continuous improvement process to ensure that institutional policies and practices support student success (Success, Strategy 5), provide alternative modalities, new programs and pedagogies and streamlined student and academic support services to facilitate timely degree completion (Success, Strategy 6) (Innovation, Strategy 9), integrate high impact practices into the student experience, including career advising and planning into internship experiences (Success, Strategy 7), partner with business, government and other institutions to support workforce development and graduate readiness (Innovation, Strategy 8), and expand support for grant participation and research (Innovation, Strategy 10). Bowie State faculty, staff, students and administrators are engaging in change management strategies and embracing experimentation so that the holistic needs of students can be better met (Innovation, Strategy 11).

Bowie State University has a long-standing core commitment to diversity; it values and celebrates diversity in all of its forms. The university community believes that its educational environment is

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enriched by the diversity of individuals, groups and cultures that come together in a spirit of learning. As the university aspires to even greater racial diversity, it fully embraces the global definition of diversity that acknowledges and recognizes differences and advances knowledge about race, gender, ethnicity, national origin, political persuasion, culture, sexual orientation, religion, age, and disability. The university creates positive interactions and cultural awareness among students, faculty and staff by infusing global diversity awareness in the curriculum, expanding co-curricular programming that promotes diversity awareness and maintains a campus climate that respects and values diversity.

The proposed program in Culturally-Responsive Teacher Leadership supports Strategy 9: Strengthen and sustain development and collaboration in addressing teaching and learning challenges through the training of current P-12 teachers in new pedagogies and strategies to address changing classroom demographics.

O. Relationship to low productivity programs identified by the Commission:

This program is in the College of Education and has no relationship with a low productivity program identified by the Commission.

P. Adequacy of Distance Education Programs (as outlined in COMAR 13B.02.03.22).

Not applicable.

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Appendix A

Course Number and Title	Course Description	Credits
CRTL 510: Culturally-responsive Knowledge, Pedagogy, Discourse and Practices	This course explores theories, methods, and procedures underlying culturally-responsive practices in addition to the interrelationships among culturally-responsive practices and current curriculum, instruction, and assessment practices through a focus on the historical, sociological, and philosophical foundations of education. It examines researched and evidenced based practices in culturally-responsive practices in addition to the removal of barriers to the achievement of diverse and marginalized students.	3
CRTL 520: Issues Related to Diversity, Equity and Access in Education	Prerequisites: CRTL 510 This course examines issues of diversity (e.g., race, economic, ethnic, cultural, social, political, physical, and cognitive diversities) and their impact on classroom and school practices, policies, and procedures. The course is structured around race and class issues within the historical, social, and political framework. Students will understand the importance of developing a new systemic vision for educational leadership in the face of the increasing diversity, change, and complexity in the local, national and global context. Students will bridge multiple perspectives and apply a cultural proficiency framework to address the current achievement and opportunity gap that exists for economically and socially challenged students.	3
CRTL 530: Teacher Leadership for Student Learning	This course will provide a thorough understanding of the need for teacher-leaders, the variety of leadership roles teachers can assume, and the impact teacher leadership can have on students, schools and the community. This course supports the development of teacher-leaders to understand, influence, and implement educational policy and practices at the school, district and national levels. This course explores how schooling structures, practices and policies produce or resist educational equity for diverse families, cultures and communities. Additionally, this course identifies challenges and opportunities at the classroom and school-wide levels to engage families and communities in efforts to provide equitable opportunities and outcomes for all students. An organized study of theories and related research will trace educational progress and map realistic directions for the future.	3
CRTL 540 Introduction to Research (cross-listed with EDUC 706)	This course is designed to provide the graduate student with an understanding of the various kinds of behavioral research and to develop an understanding of various research designs appropriate to behavioral sciences. Use of basic statistical techniques appropriate to these designs is included.	
CRTL 550: Culturally-responsive Curriculum, Instruction and Assessment Practices	Prerequisites: EDUC 510, EDUC 520 This course, through a lens of culturally-responsive theory, defines what 21st-century skills are, assesses current practices, and builds essential skills that support and develop 21st-century teaching and learning skills needed to navigate and design the future —creativity, collaboration, communication, critical thinking and problem solving—along with content and fueled by rapidly changing technology. This course will explore the intersection between culturally-responsive pedagogy and 21st-century teaching and learning practices as well as the implications for designing culturally-responsive learning communities.	3

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CRTL 650: Using Data and Research to Improve Practice	This course is designed for teacher-leaders to acquire foundational skills to interpret data, research, and teaching and leading standards. This course will help students to conceptualize student and school data to build learning communities that are student driven and student focused to increase student learning. Students will work to identify problems of practice and use evidence to systemically address teaching and learning concerns.	3
CRTL 660: School and Community Relations (cross-listed with ESAS 704)	This course is designed to consider how issues and confrontations, such as school personnel, pupils, parents, and representatives of social institutions and agencies, interact. The question to resolve is how the school may best use the human resources surrounding it to the enhancement of its goals and its programs.	3
CRTL 670: Dynamics of Group Behavior (Cross-listed with PSYC 739)	This course is primarily concerned with the way in which small, face-to-face groups function and the factors which influence their functioning. Secondly, factors that influence organization functioning will be considered. The effect of the individual's behavior on other group members and the group will be examined. Various experiential activities, such as role-playing, subgroup exercises and simulation will be used to demonstrate and analyze facets of group dynamics. The course is designed to assist teachers, administrators, managers, and curriculum workers.	3
CRTL 680: Instructional Coaching and Mentoring for Student Learning	This course will focus on ways to cultivate the next generation of teacher-leaders who may serve as mentors to other peer teachers who would like to become teacher-leaders. This course will help teacher-leaders to model mentoring strategies across race/ethnicity and gender groups by being insightful and to demonstrate informative ways to help others to experience a mentoring relationship in deeper and impactful ways to bridge the gender gap in teacher leadership. This course will further assist teachers in gaining knowledge to help close the gap in the literature on race, ethnic, and gender differences in mentoring. Additionally, this course will help to provide an in-depth look at successful mentorships across gender and race/ethnicity between experienced and emerging scholars of color, social and cultural divide. This course is designed to acquaint educators with theories and current research that support innovative practices and effective teaching strategies in K-12 school settings by using effective coaching, mentoring skills and giving support to peer teachers.	3
CRTL 690 – Seminar in School Administration (Capstone Project) (cross-listed with ESAS 825)	This seminar has three main purposes: (1) to assist the student in completing the research paper requirement; (2) to review major topics in the area of concentration; and (3) to achieve an in-depth exploration of major issues and trends in the field of curriculum, instruction and assessment.	3

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Appendix B: Quality of Program Faculty

	Highest Degree Earned/ Field of Study	Rank	Status (FT or PT)	Courses Teaching	Narrative Description of Faculty Credentials
Existing Faculty					
Constance Brooks	Ed.D.	Associate Professor	FT	CRTL 540	<p>Dr. Brooks has experience as a Mathematics and Computer Science Teacher as well as a Local School and Central Office Administrator. Dr. Brooks has served as the AERA Session Chair for Secondary.</p> <p>Mathematics; as a Reviewer of papers and presentations for AERA as well as a contributor to the GEAR UP GRANT, Preparing High School students to transition into high school, at Central High School. Dr. Brooks has also presented at Oxford University in 2008</p>
Julius Davis	Ed.D.	Associate Professor	FT	CRTL 520	<p>Dr. Davis currently serves as the Program Coordinator of the MAT program at BSU. Dr. Davis has extensive experience as a math teacher in the public schools and his research and work has been steeped in culturally-responsive theory and pedagogy.</p> <p>He has also had extensive publications such as "Davis, J. Martin, D.B. (2008). Racism, assessment instructional practices: Implications for mathematics teachers of African American students. Journal of Urban Mathematics Education 1(1), 10-34 with his most recent publication as co-editor of, Critical Race Theory in Mathematics Education. Dr. Davis has presented papers regarding the African American mathematics teacher narrative as well as challenges faced by African-American students and their plight to becoming of math literate.</p>
Davenia Lea	Ph.D. Early Childhood Special Education	Associate Professor	FT	CRTL 550	<p>Dr. Lea has been in the field of higher education for over 10 years and taught in a public school system for 10 years. She has a wealth of experience in culturally-responsive pedagogy, working with diverse families, collaboration, multidisciplinary teaming, and global education. Dr. Lea is published and has made several</p>

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	Highest Degree Earned/ Field of Study	Rank	Status (FT or PT)	Courses Teaching	Narrative Description of Faculty Credentials
					<p>presentations to include:</p> <p>Journal of Adventist Education co-editor of the special edition on Urban Education August 2015 “Cultural Reciprocity as a Transformative Journey in Research and Practice”. In <i>Culture in Special Education: Building Reciprocal Family- Professional Relationships, (2nd ed)</i>. Ed. Harry, B., Kalyanpur, M., 2012</p> <p>Lea, D. (2006) ‘You Don’t Know Me Like That’: Patterns of disconnect amongst early interventionist and adolescent mothers of children with disabilities’. <i>The Journal of Early Intervention, v 28, 227-251.</i></p> <p>Co-Presenter, “When Cultures Collide”, Council for Exceptional Children Annual Conference, Washington, DC 2011</p> <p>Presenter, “Does Cultural Identity Really Matter, National Association for Multicultural Education Annual Conference, New Orleans, LA 2008</p>
<p>Akeda Pearson</p>	<p>Ed.D. in Education Leadership</p>	<p>Assistant Professor</p>	<p>FT</p>	<p>CRTL 660 CRTL 690</p>	<p>Dr. Pearson currently serves as the BSU Director of Advanced Studies in Teaching and Learning and has extensive experience as an educator and educational leader. She has served as the School District’s Communications Specialist, Queen Anne’s County Public Schools as the School District’s Professional Development Coordinator (Equity and Cultural Proficiency Expert) in Richmond, VA; as the School District’s School Community Engagement Liaison for Anne Arundel County Public Schools, as well as a Teacher Mentor for Baltimore County Public Schools. Dr. Pearson is published “Achievement: Providing Equity and Access to The Most Vulnerable High School Special Needs Students.” Cambridge College. 2014.</p> <p>Dr. Pearson has also worked to collaborate with local school districts providing</p>

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	Highest Degree Earned/ Field of Study	Rank	Status (FT or PT)	Courses Teaching	Narrative Description of Faculty Credentials
					<p>professional development opportunities and summer institutes in order to meet the needs of conditionally licensed teachers within PGCPS.</p>
Jacquelyn Sweeney	Ph.D. Curriculum , Teaching, Policy	Associate Professor	FT	CRTL 520	<p>Dr. Sweeney coordinates the BSU Graduate Reading Program and has experience as an elementary, middle school, and an alternative school educator. Her research is focused on culturally-responsive and sustaining practices. She also has publications and presentations in the area of CRT:</p> <p>Sweeney, J. Damrow, A. (submitted for review August 2019). 'You catch yourself thinking these things': Preservice teachers addressing their biases and stereotypes through Computer Mediated Communication. Journal of Technology and Teacher Education.</p> <p>McGuire, M. (2019). A Collaborative Project: How Can I Say This So You Will Stay? Creative work inspired by Sweeney, J. Damrow, A. and their qualitative research project focused on preparing teachers for culturally, linguistically, and socioeconomically diverse communities. NEA-Sponsored Staged Reading Sept 2 at Kennedy Center and Sept 3 at Bowie State University.</p> <p>Damrow, A. L., Sweeney, J. S. (2019). Beyond the bubble: Preparing preservice teachers through dialogue across distance and difference. Teaching and Teacher Education, 80, 255-265.</p> <p>Damrow, A., Sweeney, J. (2019). Building relationships, strengthening professional learning, and inspiring a play: A story of peer-to-peer dialogue across institutional boundaries. Ethnography in Education Research Forum. Penn Ethnography Forum.</p> <p>Sweeney, J. (2017). Teachers' Religious Ideologies and Classroom Equity. SIG Religion and Education Paper Session. AERA Conference. San Antonio, TX. Sweeney, J.</p>

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	Highest Degree Earned/ Field of Study	Rank	Status (FT or PT)	Courses Teaching	Narrative Description of Faculty Credentials
					<p>Damrow, A. (2016). Pre-service Teachers' Shared Stories: Raising Sociocultural Consciousness. Ethnography in Education- Penn GSE, Philadelphia, PA.</p> <p>Sweeney, J. (2015) The Cultural Fabric of Five: How life stories influence teacher noticing. AERA. Division K: Teacher and Teacher Education. Chicago, IL.</p> <p>Sweeney, J. (2015). Veteran teachers' levels of noticing within diverse populations. AERA. SIG-Research Focus on Black Education. Chicago, IL.</p>
Ann Hilliard	Ed.D. in Higher Education Studies	Associate Professor	FT	CRTL 680	<p>Served previously as a Principal, Assistant Principal, Coordinator, Academic Achievement Specialist, Coordinator for Maryland s Tomorrow, Business Manager and Teacher</p> <p>Served as Editor-in-Chief for the International Journal of Educational Leadership, 2019.</p> <p>Peer Reviewer for Journal of College Student Retention: Research, Theory Practice (2019).</p> <p>Served as Peer Reviewer for Journal of College Student Retention: Research, Theory Practice Editorial Office, Sage Publication Spring, 2017. reviewer for dissertation from a Jordanian student who conducted research on the Sheikh</p> <p>Mohammed bin Rashid Al Maktoum of Dubai who is also the Vice-President of the UAE, 2016. Prof. Nitza Davidovitch, Ariel University, Israel, 2017.</p>
Wilbur Parker	Ed.D. Education Organization Leadership	Assistant Professor	FT	CRTL 530	<p>Dr. Parker currently serves as the chair of the Educational Studies and Leadership program at BSU. Dr. Parker has extensive experience as a science teacher in the public schools and has extensive experience in the area of professional development and educational leadership. He served as Department Chairman Biological Sciences - Secondary Science Education, as a Professional Develop Lead Teacher, a District Professional</p>

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	Highest Degree Earned/ Field of Study	Rank	Status (FT or PT)	Courses Teaching	Narrative Description of Faculty Credentials
					<p>Development (NBPTS) Coordinator, a Professional Learning Coordinator for BITS I and an International Baccalaureate (PYP, MYP, DP) - National Program Evaluator</p> <p>He also has publications such as "Identifying and Supporting Black Male Students in Advanced Mathematics Courses throughout the K-12 Pipeline" Gifted Child Today.(2019).</p>
Renee Foose	Ed.D. Education Policy and Leadership	Associate Professor	FT	CRTL 650	<p>Book Chapter - Anti-Semitic Frameworks for College Campuses - Peter Lang Publishers - Spring 2019</p> <p>MD Advanced Professional Teaching Certificate MD Administrator I Certificate MD Administrator II Certificate MD Superintendent Endorsement K-12 Experience and Leadership Superintendent - 5 years Deputy Superintendent 2 years Associate Superintendent - 2 years Central Office Director - 2 years Middle School Principal - 5 years High School Assistant Principal - 3 years High School Teacher - 5 years Middle/Elementary Teacher - 2 years</p>
Darla Scott	PhD in Developmental Psychology	Assistant Professor	FT	CRTL 670	<p>Director of Training and Curriculum Development for school improvement projects for 8 years; Middle School teacher for one year; Site Director for YMCA summer and afterschool programs for 2 Years; Site Coordinator for Culturally Relevant Afterschool Programs for 2 years; Head Start teacher aide for two years</p> <p>Bruce, A.W. Scott, D.M. (2013). Having their say: Student perceptions of teaching excellence. Poster presented at American Educational Research Association Annual Conference, San Francisco.</p> <p>Boykin, A.W., Scott, D.M. Bruce, A.W. (In preparation). Music and Variability: Improving reading comprehension and math</p>

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	Highest Degree Earned/ Field of Study	Rank	Status (FT or PT)	Courses Teaching	Narrative Description of Faculty Credentials
					<p>estimation skills of African American low income elementary school children. To be submitted to the Journal of Negro Education.</p> <p>Coleman, K.D., Hurley, E.A., Boykin, A.W., Coleman, S.T., Scott, D.M. Tyler, K.M. (In press). The influence of communal learning contexts on African American elementary student’s creative problem solving. To be submitted to the Journal of Black Psychology.</p> <p>Coleman, S.T., Boykin, A.W., Tyler, K.M., Scott, D.M., Hurley, E.A. (In press). Exploring the effects of communal learning on mathematics performance among African American middle grade students. To be submitted to the Journal of Black Psychology</p>

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Appendix C: Alignment of National and State Standards to Proposed Program Courses

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M.Ed. Culturally Responsive Curriculum Instruction and Assessment Program
 Alignment of Course Student Learning Outcomes to
The National Education Association (NEA) Teacher Leader Model Standards

Domain I. Fostering a Collaborative Culture to Support Educator Development and Student Learning										
	CRTL 510	CRTL 520	CRTL 530	CRTL 540	CRTL 550	CRTL 650	CRTL 660	CRTL 670	CRTL 680	CRTL 690
a. Utilizes group processes to help colleagues work collaboratively to solve problems, make decisions, manage conflict, and promote meaningful change;							X	X	X	
b. Models effective skills in listening, presenting ideas, leading discussions, clarifying, mediating, and identifying the needs of self and others in order to advance shared goals and professional learning;							X	X	X	
c. Employs facilitation skills to create trust among colleagues, develop collective wisdom, build ownership and action that supports student learning;							X	X	X	
d. Strives to create an inclusive culture where diverse perspectives are welcomed in addressing challenges; and		X	X		X			X		
e. Uses knowledge and understanding of different backgrounds, ethnicities, cultures, and languages to promote effective interactions among colleagues.	X			X	X			X		X

Domain II. Promoting Professional Learning for Continuous Improvement										
	CRTL 510	CRTL 520	CRTL 550	CRTL 650	CRTL 530	CRTL 680	CRTL 690	CRTL 540	CRTL 670	CRTL 660
a) Collaborates with colleagues and school administrators to plan professional learning that is team-based, job-embedded, sustained over time, aligned with content standards, and linked to school/district improvement goals;							X		X	X
b) Uses information about adult learning to respond to the diverse learning needs of colleagues by identifying, promoting, and facilitating varied and differentiated professional learning;									X	

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c) Facilitates professional learning among colleagues;							X	X		X
d) Identifies and uses appropriate technologies to promote collaborative and differentiated professional learning;			X		X	X				
e) Works with colleagues to collect, analyze, and disseminate data related to the quality of professional learning and its effect on teaching and student learning;							X	X		
f) Advocates for sufficient preparation, time, and support for colleagues to work in teams to engage in job-embedded professional learning;					X					X
g) Provides constructive feedback to colleagues to strengthen teaching practice and improve student learning; and							X			X
h) Uses information about emerging education, economic, and social trends in planning and facilitating professional learning.			X			X			X	

Domain III: Facilitating Improvements in Instruction and Student Learning										
	CRTL 510	CRTL 520	CRTL 550	CRTL 650	CRTL 530	CRTL 680	CRTL 690	CRTL 540	CRTL 670	CRTL 660
a) Facilitates the collection, analysis, and use of classroom- and school-based data to identify opportunities to improve curriculum, instruction, assessment, school organization, and school culture;				X	X					
b) Engages in reflective dialog with colleagues based on observation of instruction, student work, and assessment data and helps make connections to research-based effective practices;				X						X
c) Supports colleagues' individual and collective reflection and professional growth by serving in roles such as mentor, coach, and content facilitator;										X
d) Serves as a team leader to harness the skills, expertise, and knowledge of colleagues to address curricular expectations and student learning needs;										X

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e) Uses knowledge of existing and emerging technologies to guide colleagues in helping students skillfully and appropriately navigate the universe of knowledge available on the Internet, use social media to promote collaborative learning, and connect with people and resources around the globe; and				X						
f) Promotes instructional strategies that address issues of diversity and equity in the classroom and ensures that individual student learning needs remain the central focus of instruction.	X	X	X							

Domain IV: Promoting the Use of Assessments and Data for School and District Improvement										
	CRTL 510	CRTL 520	CRTL 550	CRTL 650	CRTL 530	CRTL 680	CRTL 690	CRTL 540	CRTL 670	CRTL 660
a) Increases the capacity of colleagues to identify and use multiple assessment tools aligned to state and local standards;				X						
b) Collaborates with colleagues in the design, implementation, scoring, and interpretation of student data to improve educational practice and student learning;				X	X					
c) Creates a climate of trust and critical reflection in order to engage colleagues in challenging conversations about student learning data that lead to solutions to identified issues; and		X	X	X						
d) Works with colleagues to use assessment and data findings to promote changes in instructional practices or organizational structures to improve student learning.				X	X				X	

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Domain V: Improving Outreach and Collaboration with Families and Community										
	CRTL 510	CRTL 520	CRTL 550	CRTL 650	CRTL 530	CRTL 680	CRTL 690	CRTL 540	CRTL 670	CRTL 660
a) Uses knowledge and understanding of the different backgrounds, ethnicities, cultures, and languages in the school community to promote effective interactions among colleagues, families, and the larger community;	X		X							
b) Models and teaches effective communication and collaboration skills with families and other stakeholders focused on attaining equitable achievement for students of all backgrounds and circumstances;										X
c) Facilitates colleagues' self-examination of their own understandings of community culture and diversity and how they can develop culturally responsive strategies to enrich the educational experiences of students and achieve high levels of learning for all students;							X			X
d) Develops a shared understanding among colleagues of the diverse educational needs of families and the community; and										X
e) Collaborates with families, communities, and colleagues to develop comprehensive strategies to address the diverse educational needs of families and the community							X	X		X

Domain VI: Advocating for Student Learning and the Profession										
	CRTL 510	CRTL 520	CRTL 550	CRTL 650	CRTL 530	CRTL 680	CRTL 690	CRTL 540	CRTL 670	CRTL 660
a) Shares information with colleagues within and/or beyond the district regarding how local, state, and national trends and policies can impact classroom practices and expectations for student learning;										X
b) Works with colleagues to identify and use research to advocate for teaching and learning processes that meet the needs of all students;										X

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c) Collaborates with colleagues to select appropriate opportunities to advocate for the rights and/or needs of students, to secure additional resources within the building or district that support student learning, and to communicate effectively with targeted audiences such as parents and community members;					X				X	
d) Advocates for access to professional resources, including financial support and human and other material resources, that allow colleagues to spend significant time learning about effective practices and developing a professional learning community focused on school improvement goals; and		X							X	X
e) Represents and advocates for the profession in contexts outside of the classroom.		X								X

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M.Ed. Culturally Responsive Curriculum Instruction and Assessment Program
 Alignment of Course Student Learning Outcomes to

**Preparing Educators for High Poverty/Culturally and Linguistically Diverse Schools:
 A Manual for Teacher Educators, Teachers, and Principals**

Prepared by the Maryland Teaching Consortium with support of the Maryland State Department of Education (MSDE)

Program Component 1: Knowing Students

Program Component 1: Understanding Culture										
PROGRAM INDICATORS	CRTL 510	CRTL 520	CRTL 550	CRTL 650	CRTL 530	CRTL 680	CRTL 690	CRTL 540	CRTL 670	CRTL 660
UC1. The program provides educators opportunities to develop their knowledge of culture and diversity and understand the implications for professional practice. Further, educators will learn about issues such as, but not limited to, racism, prejudice, white privilege, and the impact of race, socioeconomics, gender, and other types of diversity, and how they impact students, families, and educators.	X	X								
UC2. The program offers cultural immersion experiences.							X			
UC3. The program provides educators with strategies for meeting the unique learning needs of ELs.					X					
UC4. The program makes a concerted effort to incorporate the parent's point of view related to school culture to determine strategies for improving interaction between the school and families.					X					X
EDUCATOR INDICATORS	CRTL 510	CRTL 520	CRTL 550	CRTL 650	CRTL 530	CRTL 680	CRTL 690	CRTL 540	CRTL 670	CRTL 660
UC5. The educator demonstrates knowledge, understanding, and respect For students' cultures.			X		X					
UC6. The educator is able to uphold the shared values and expectations of the school while understanding and respecting different perspectives of students and colleagues.		X								
UC7. The educator strives to understand and respect cultures outside his/her own.					X		X		X	

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UC8. The educator provides opportunities for students to show understanding and empathy for others.					X					
Program Component 1: Building Relationships										
PROGRAM INDICATORS	CRTL 510	CRTL 520	CRTL 550	CRTL 650	CRTL 530	CRTL 680	CRTL 690	CRTL 540	CRTL 670	CRTL 660
BR1. The program teaches educators how to build meaningful relationships with students, parents, colleagues, administrators, and other stakeholders in multiple contexts.			X							X
BR2. The program provides opportunities for educators to develop an empathetic disposition for working with students, parents, colleagues, and other stakeholders.		X			X					
BR3. The program provides opportunities to develop effective communication skills that reflect sensitivity to cultural norms.	X									X
EDUCATOR INDICATORS	CRTL 510	CRTL 520	CRTL 550	CRTL 650	CRTL 530	CRTL 680	CRTL 690	CRTL 540	CRTL 670	CRTL 660
BR4. The educator considers the whole child when developing relationships with students.					X					
BR5. The educator creates positive personal relationships with students.					X				X	
BR6. The educator observes student-student interactions to better understand each individual.				X	X					
BR7. The educator employs specific strategies to build relationships of mutual trust and respect with diverse students and families.										X
BR8. The educator values communication with families and understands the important role family and community play in supporting student success.					X					
BR9. The educator provides opportunities for families to be involved in their child's educational experiences.					X				X	
BR10. The educator views the parent as an expert on the child.										X
BR11. The educator facilitates student social skill development to promote effective communication.					X					
BR12. The educator infuses the role of family and community into teaching and learning.					X					

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BR13. The educator provides opportunities for students to form positive relationships and work in teams.					X				X	
BR14. The educator participates in the local community.							X	X		
BR15. The educator provides opportunities for students to contribute in meaningful ways to the school and the surrounding community.					X				X	
Program Component 1: The Child As A Learner										
PROGRAM INDICATORS	CRTL 510	CRTL 520	CRTL 550	CRTL 650	CRTL 530	CRTL 680	CRTL 690	CRTL 540	CRTL 670	CRTL 660
CL1. The program provides educators with opportunities to work with children at all developmental levels.					X				X	
CL2. The program provides candidates with the knowledge of the instructional implications of cultural and linguistic diversity.	X	X								
CL3. The program provides a venue to showcase student work.							X	X		
EDUCATOR INDICATORS	CRTL 510	CRTL 520	CRTL 550	CRTL 650	CRTL 530	CRTL 680	CRTL 690	CRTL 540	CRTL 670	CRTL 660
CL4. The educator believes that each and every student can learn at high Levels and actively contribute to class activities.				X					X	
CL5. The educator believes that empathy and understanding the lived experiences of students are fundamental in reaching and teaching each learner.		X	X							
CL6. The educator helps students develop resilience through protective factors, such as helping students not take the adversity in their lives personally or see adversity as permanent or pervasive.					X				X	
CL7. The educator helps students recognize when internalized negative messages are impacting their ability to achieve.		X			X				X	
CL8. The educator understands the emotional response of moving to a new country, and the situations of various ELs		X			X					
CL9. The educator uses knowledge of human and brain development to identify the impact of poverty on a student's learning and his/her sociological, physical, and psychological development.		X			X					
CL10. The educator understands the academic,		X	X		X				X	

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functional, social, and behavioral needs of SWDs, including SWDs who are also ELs.										
CL11. The educator encourages and creates opportunities for students to take ownership of their learning through student choice and self-regulation.				X	X					
CL12. The educator understands the relationship between self-esteem and motivation in students.	X									
CL13. The educator understands that praise can be either a motivator or de-motivator and uses praise as a way to support specific needs of each student.					X					
CL14. The educator provides support for students to encourage resilience.					X					
CL15. The educator believes intelligence is a malleable quality to be developed in all students.	X									
CL16. The educator believes an important part of the profession is advocating for children.	X				X					X
CL17. The educator recognizes students' internal and external stressors and provides constructive outlets for responses to those stressors.					X				X	
CL18. The educator plans and facilitates activities that broaden student experiences.					X				X	
CL19. The educator understands the developmental learning process.				X	X					
CL20. The educator provides opportunities for students to recognize their own emotions, values, strengths, and limitations.				X	X				X	

Program Component 1: Behavioral Interventions										
PROGRAM INDICATORS	CRTL 510	CRTL 520	CRTL 550	CRTL 650	CRTL 530	CRTL 680	CRTL 690	CRTL 540	CRTL 670	CRTL 660
BI1. The program provides opportunities in courses and clinical experiences to practice active listening, conflict de-escalation, and other strategies to promote a positive and productive classroom environment.					X		X	X		
BI2. The program provides instruction to candidates on teaching students strategies for self-regulation.					X		X	X		
BI3. The program provides educators opportunities to develop knowledge of and strategies to address					X		X	X		

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bullying and harassment.										
EDUCATOR INDICATORS	CRTL 510	CRTL 520	CRTL 550	CRTL 650	CRTL 530	CRTL 680	CRTL 690	CRTL 540	CRTL 670	CRTL 660
BI4. The educator is non-judgmental and practices skills of active listening and rephrasing.					X					
BI5. The educator identifies components of bullying and harassment.									X	
BI6. The educator is able to use strategies to de-escalate emotional situations and to resolve conflict.					X					
BI7. The educator is able to identify the consequences of bullying and related issues.		X								
BI8. The educator effectively uses positive reinforcement to promote productive behaviors.					X					
BI9. The educator develops a classroom leadership style that is respectful while maintaining a rigorous academic environment.					X					X
BI10. The educator develops Behavioral Intervention Plans as needed.					X					
BI11. The educator facilitates student self-regulation and ability to circumvent and resolve interpersonal conflict.					X					

Program Component 1: Knowing the Resources										
PROGRAM INDICATORS	CRTL 510	CRTL 520	CRTL 550	CRTL 650	CRTL 530	CRTL 680	CRTL 690	CRTL 540	CRTL 670	CRTL 660
KR1. The program instructs educators on how to identify school and community resources that are available for students, educators, and families.					X				X	
KR2. The program ensures that information about relevant resources at the IHE is shared with all school stakeholders.								X		
EDUCATOR INDICATORS	CRTL 510	CRTL 520	CRTL 550	CRTL 650	CRTL 530	CRTL 680	CRTL 690	CRTL 540	CRTL 670	CRTL 660
KR3. The educator serves as a student and family advocate, connecting families with resources, supports, and services.										X
KR4. The educator infuses community-based resources into instruction to support student learning.					X					

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KR5. The educator identifies student behaviors that prompt referral.					X	X				
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Program Component 2: Understanding Oneself in the Context of Poverty/Cultural & Linguistic Diversity

Program Component 2: Core Beliefs										
PROGRAM INDICATORS	CRTL 510	CRTL 520	CRTL 550	CRTL 650	CRTL 530	CRTL 680	CRTL 690	CRTL 540	CRTL 670	CRTL 660
CB1. The program provides opportunities for educators to explore their core beliefs about teaching and learning.	X	X	X					X		
CB2. The program provides opportunities to develop a personal philosophy of teaching that embodies culturally responsive pedagogy.			X							
CB3. The program implements a process for identifying and assessing dispositions, and when appropriate, provides specific and timely counseling related to dispositional concerns.			X				X			
CB4. The program teaches the importance of a growth mindset.	X								X	
CB5. The program engages educators in the examination of new research and teaching strategies related to high poverty/culturally and linguistically diverse school populations.					X			X		
CB6. The program provides opportunities for teachers to engage with the community outside of the classroom.							X			
EDUCATOR INDICATORS	CRTL 510	CRTL 520	CRTL 550	CRTL 650	CRTL 530	CRTL 680	CRTL 690	CRTL 540	CRTL 670	CRTL 660
CB7. The educator believes she/he can teach all students in such a way that they can learn and achieve at high levels.	X		X							
CB8. The educator accepts responsibility for the education of the whole child.			X		X					
CB9. The educator values student creativity and process as well as product.					X				X	
CB10. The educator believes that critical and creative thinking can be taught.			X		X					
CB11. The educator believes that every student can develop resilience.			X		X					

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EDUCATOR INDICATORS CONTINUED	Program Component 2: Core Beliefs Continued									
	CRTL 510	CRTL 520	CRTL 550	CRTL 650	CRTL 530	CRTL 680	CRTL 690	CRTL 540	CRTL 670	CRTL 660
CB12. The educator believes culture plays a large part in everyone's lives and actively seeks experiences to evolve in his/her understanding of race and culture.	X		X							
CB13. The educator assumes positive intent and operates with empathy.			X		X					
CB14. The educator embraces and responds positively to a variety of cultures.		X	X							
CB15. The educator understands the difference between productive and unproductive instructional practices and their implications for student learning.			X		X					
CB16. The educator views himself/herself as a learner and models the value of lifelong learning.							X	X		
CB17. The educator seeks a deeper understanding of his/her worldview, in conjunction with a rich understanding of the students' personal worldview.	X						X	X		

Program Component 2: Reflective Practice										
PROGRAM INDICATORS	CRTL 510	CRTL 520	CRTL 550	CRTL 650	CRTL 530	CRTL 680	CRTL 690	CRTL 540	CRTL 670	CRTL 660
RP1. The program teaches candidates strategies to develop the practice of deep reflection on all aspects of their teaching.			X	X	X		X			
RP2. The program teaches candidates about the value of multiples lenses as an important component of their reflective process.		X	X							
RP3. The program teaches candidates to implement data-driven instruction as part of the reflective process.				X	X					
RP4. The program provides multiple and varied opportunities for self-reflection.	X		X				X	X		
RP5. The program encourages the ongoing practice of reflection as a part of lifelong learning.			X	X						
RP6. The program provides strategies for achieving and maintaining an appropriate work/life balance.			X				X			

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EDUCATOR INDICATORS	CRTL 510	CRTL 520	CRTL 550	CRTL 650	CRTL 530	CRTL 680	CRTL 690	CRTL 540	CRTL 670	CRTL 660
RP7. The educator values critical feedback.							X	X		
RP8. The educator regularly reflects on his/her own strengths and weaknesses.			X		X		X	X		
RP9. The educator assumes responsibility for failures and successes and is willing to seek alternative solutions.							X			
RP10. The educator uses his/her awareness of personal biases, and those of others, to shape appropriate responses and reactions.								X		
RP11. The educator and candidate debrief findings from student feedback surveys to improve understanding and interactions with their learners, who may have different values, experiences, and filters.							X	X		
RP12. The educator uses student data and reflection to analyze and inform Instruction.				X	X					
RP13. The educator strives to maintain an appropriate work/life balance.							X			

Program Component 3: Teaching in the Context of Poverty/Cultural and Linguistic Diversity

Program Component 3: Instruction and Assessment										
PROGRAM INDICATORS	CRTL 510	CRTL 520	CRTL 550	CRTL 650	CRTL 530	CRTL 680	CRTL 690	CRTL 540	CRTL 670	CRTL 660
IA1. The program offers diverse experiences in a variety of settings, working with a variety of educators, students, and other members of the community.							X	X		
IA3. The program provides frequent, specific, and meaningful feedback to candidates.							X			
IA4. The program provides opportunities to apply the use of culturally responsive pedagogy.					X		X			
IA5. The program prepares educators to meet the needs of SWDs and EIs and provides opportunities to apply the use of group-specific pedagogy.				X	X					
IA6. The program uses a lesson plan template that reflects planning for diverse learners.					X					

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IA7. The program models instruction that allows for learner choice.					X					
IA8. The program integrates the arts into professional learning experiences.					X					
IA9. The program models technology integration and instruction that promotes 21st-century learning skills.						X				
EDUCATOR INDICATORS	CRTL 510	CRTL 520	CRTL 550	CRTL 650	CRTL 530	CRTL 680	CRTL 690	CRTL 540	CRTL 670	CRTL 660
IA10. The educator understands the impact of culture on student learning and applies that knowledge when planning and delivering instruction and assessment.				X	X					
IA11. The educator demonstrates that content knowledge and prescribed learning standards are important for designing meaningful lessons.					X				X	
IA12. The educator presents subject matter and social issues from multiple perspectives to enhance student learning.			X		X					
IA13. The educator designs curricula that engage, foster higher order thinking, and allow for explicit teaching of a variety of learning skills/strategies.			X						X	
IA14. The educator uses research to effectively design instruction and assessment that is relevant to students.			X		X			X		
IA15. The educator applies systematic programs such as Universal Design for Learning (UDL) to develop curriculum and assessments that meet the needs of diverse learners.			X		X					
IA16. The educator implements strategies for differentiation and appropriate assessments for ELs as needed.			X		X					
IA17. The educator applies the progression of language development (preproduction, early production, speech emergence, intermediate fluency, and fluency) in working with students from high poverty/culturally and linguistically diverse schools.			X		X				X	
IA18. The educator explores best practices in meeting the needs of ELs, SWDs, and high poverty and culturally/linguistically diverse students through action research.			X		X				X	
IA19. The educator understands both the value, and the processes behind implementation, of a balanced and culturally responsive assessment system.			X	X						

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IA20. The educator provides opportunities for student self-assessment and self-reflection in relation to personal and academic goals.				X	X					
IA21. The educator integrates the arts into content instruction to promote student learning and to encourage student self-expression and communication.					X				X	
IA22. The educator effectively integrates technology and 21st-century skills instruction to promote student learning.						X				

Program Component 3: Positive Classroom Environment										
PROGRAM INDICATORS	CRTL 510	CRTL 520	CRTL 550	CRTL 650	CRTL 530	CRTL 680	CRTL 690	CRTL 540	CRTL 670	CRTL 660
PCE1. The program provides educators with a safe space to be innovative and supports innovation in the classroom.							X	X		
PCE2. The program explicitly teaches the skills needed for effective classroom leadership in a culturally responsive learning environment.		X			X					X
PCE3. The program engages candidates in active learning experiences related to classroom leadership, including but not limited to case studies, role play, and video scenarios.					X					X
EDUCATOR INDICATORS	CRTL 510	CRTL 520	CRTL 550	CRTL 650	CRTL 530	CRTL 680	CRTL 690	CRTL 540	CRTL 670	CRTL 660
PCE4. The educator builds on students' strengths, rather than acting from a deficit model.			X						X	
PCE5. The educator ensures that students see themselves in texts, curricula, and school/classroom displays.			X		X				X	
PCE6. The educator creates a safe and structured environment that is responsive to the needs of all students.			X		X				X	
PCE7. The educator provides opportunities for students to feel a sense of belonging, competence, and usefulness.			X		X				X	
PCE8. The educator models effective participation in a community through facilitation of class meetings for goal setting, use of effective communication, and establishment of class norms in order to foster a sense of belonging and prevent conflict.			X		X					

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PCE9. The educator celebrates small victories with students to develop student perseverance.					X					
PCE10. The educator provides opportunities for students to practice responsible decision-making about personal and social behavior.					X				X	
PCE11. The educator is intentional about language use, choosing to use language that communicates respect and high expectations.			X		X					
PCE12. The educator facilitates effective classroom discussions.			X		X					

Program Component 3: Collaboration										
PROGRAM INDICATORS	CRTL 510	CRTL 520	CRTL 550	CRTL 650	CRTL 530	CRTL 680	CRTL 690	CRTL 540	CRTL 670	CRTL 660
C2. The program provides opportunities for educators to develop coteaching and collaboration skills within and among content areas.					X					
C3. The program provides models of effective collaboration, co-planning, and co-teaching.									X	
C4. The program differentiates for all educators the similarities and differences between both co-teaching as an internship model and coteaching as a special education model, and the difference between coteaching and collaborating.					X					
C6. The program infuses collaborative teaching strategies within the IHE curriculum.					X					
C7. The program fosters collaborative relationships between schools and cultural arts organizations/museums.					X					
C8. The program provides educators with the opportunity to visit the EL and special education classes, debrief experiences, and participate in collaborative meetings with EL educators, special educators, and paraprofessionals.					X					X
C9. The program ensures that all candidates collaborate, plan, or teach with special resource personnel.				X						
EDUCATOR INDICATORS	CRTL 510	CRTL 520	CRTL 550	CRTL 650	CRTL 530	CRTL 680	CRTL 690	CRTL 540	CRTL 670	CRTL 660
C10. The educator engages effectively with colleagues, family, community, and other					X					

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stakeholders to build classroom culture and improve student outcomes.										
C11. The educator collaborates with visual arts, media arts, music, drama, and dance educators to develop arts-integrated curriculum.					X					
C12. The educator collaborates with special resource personnel such as reading specialists and instructional assistants.				X						



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

TOPIC: Frostburg State University: Bachelor of Science in Life-Cycle Facilities Management

COMMITTEE: Education Policy and Student Life

DATE OF COMMITTEE MEETING: Tuesday, May 5, 2020

SUMMARY: Frostburg State University (FSU) is proposing a climate-change and emergency preparedness-oriented Life-Cycle Facilities Management bachelor's program, which would focus on: 1) techniques uniquely critical to responding to climate-change forecasts, and 2) innovative instruction to prepare industry leaders to properly plan and build environments that would be sustainable for structures' lifetimes.

The program, which would be housed in FSU's College of Liberal Arts and Sciences with other interdisciplinary programs, and includes existing courses from the Geography, Mathematics, Philosophy, Economics, and Management Departments. The following themes would be infused into the curriculum: sustainable site development; water savings; energy efficiency; materials selection; and indoor environmental quality. In keeping with FSU's emphasis on experiential learning, the program would also require two summer internships for a total of 12 credits and allow prior learning credits to be awarded for individuals with experience.

The proposed program supports FSU's mission to address workforce needs in the region and state. It also affirms the university's commitment to sustainability, with a number of courses being focused on environmental issues and sustainable construction practices. As part of the overall strategic plan of the institution to meet workforce demands and all graduates have High Impact Practices with a focus on internships and integrative capstone experiences, the Life-Cycle Facilities Management degree will support these institutional priorities.

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 fees revenue.

CHANCELLOR'S RECOMMENDATION: That the Committee on Education Policy and Student Life recommend that the Board of Regents approve the proposal from Frostburg State University to offer the Bachelor of Science in Life-Cycle Facilities Management.

COMMITTEE RECOMMENDATION:

DATE: May 5, 2020

BOARD ACTION:

DATE:

SUBMITTED BY: Joann A. Boughman

301-445-1992

jboughman@usmd.edu



One University. A World of Experiences.

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F 301.687.7960

April 2, 2020

Dr. Jay A. Perman, Chancellor
University System of Maryland
701 E. Pratt Street
Baltimore, MD 21202

Dear Chancellor Perman,

Frostburg State University (FSU) is proposing a climate-change and emergency preparedness-oriented Life-Cycle Facilities Management bachelor's program, which would focus on: 1) techniques uniquely critical to responding to climate-change forecasts, and 2) innovative instruction to prepare industry leaders to properly plan and build environments that would be sustainable for structures' lifetimes. The following themes would be infused into the curriculum: sustainable site development; water savings; energy efficiency; materials selection; and indoor environmental quality. In keeping with FSU's emphasis on experiential learning, the program would also require two summer internships for a total of 12 credits and allow prior learning credits to be awarded for individuals with experience.

The proposed program supports FSU's mission to address workforce needs in the region and state. It also affirms the university's commitment to sustainability, with a number of courses being focused on environmental issues and sustainable construction practices.

Proposal Type:	New Academic Program
Program:	Life-Cycle Facilities Management
Title of Proposed Program:	Bachelor of Science in Life-Cycle Facilities Management
Award Level:	Bachelor's Degree
CIP:	309999
HEGIS:	490400

We would appreciate your support for this request. Enclosed please find the completed proposal and cover sheet. If you have any questions, please do not hesitate to contact me or our Assistant VP for Analytics, Dr. Sara-Beth Bittinger at sbittinger@frostburg.edu.

Yours truly,

Dr. Elizabeth Throop
Provost and Vice President for Academic Affairs

pc: Dr. Antoinette Coleman, Associate Vice Chancellor for Academic Affairs, USM
Dr. Emily Dow, Assistant Secretary of Academic Affairs, MHEC
Dr. Sara-Beth Bittinger, Interim Assistant VP for Analytics, FSU
Dr. Kim Hixson, Dean of College of Liberal Arts & Sciences, FSU

FROSTBURG STATE UNIVERSITY IS A CONSTITUENT INSTITUTION OF THE UNIVERSITY SYSTEM OF MARYLAND

UNIVERSITY SYSTEM OF MARYLAND INSTITUTION PROPOSAL FOR

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

Frostburg State University

Institution Submitting Proposal

Life Cycles Facilities Management

Title of Proposed Program

Bachelor's Degree

Award to be Offered

Fall 2020

Projected Implementation Date

4904.00

Proposed HEGIS Code

309999.0000

Proposed CIP Code

College of Liberal Arts and Sciences

Department in which program will be located

Sara-Beth Bittinger

Department Contact

301-687-3130

Contact Phone Number

sbittinger@frostburg.edu

Contact E-Mail Address



Signature of President or Designee

April 6, 2020

Date

A. Centrality to Institutional Mission and Planning Priorities:

1. Program description and relationship to mission:

Frostburg State University (FSU) is proposing a climate-change and emergency preparedness-oriented Life-Cycle Facilities Management bachelor's program, which would focus on: 1) techniques uniquely critical to responding to climate-change forecasts, and 2) innovative instruction to prepare industry leaders to properly plan and build environments that would be sustainable for structures' lifetimes.

The proposed interdisciplinary program would require 105 undergraduate semester hours of credit. This would include 59 credits of Life-Cycle Management courses and 19 credits of Geography. The following themes would be infused into the curriculum: sustainable site development; water savings; energy efficiency; materials selection; and indoor environmental quality. In keeping with FSU's emphasis on experiential learning, the program would also require two summer internships for a total of 12 credits and allow prior learning credits to be awarded for individuals with experience.

The proposed program supports FSU's mission to address workforce needs in the region and state. It also affirms the university's commitment to sustainability, with a number of courses being focused on environmental issues and sustainable construction practices.

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

As part of the overall strategic plan of the institution to meet workforce demands and all graduates have High Impact Practices with a focus on internships and integrative capstone experiences, the Life-Cycle Facilities Management degree will support these institutional priorities. With a rich experiential learning curriculum and a high workforce need, the LCFM program will affirm.

Specifically, this proposed program supports the following institutional goals (FSU Strategic Plan, <https://www.frostburg.edu/about-frostburg/strategic-plan-2018-2023/strategic-goals.php>):

Goal I. Focus learning on both the acquisition and application of knowledge:

- A. Ensure students acquire the essential knowledge and skills needed to succeed.
- B. Infuse applied learning throughout the FSU curriculum.

Goal IV. Align university resources – human, fiscal, and physical – with strategic priorities:

- C. Ensure academic programs meet student and workforce expectations.

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 new program will be funded via Workforce Development Initiative (WDI) enhancement funding via the state of Maryland. Frostburg State University submitted a proposal for funds to support the creation of a program to develop curriculum for a workforce need. FSU was awarded these funds, which are part of our base state appropriation.

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

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

Funds to support this program provided by the Workforce Development Initiative are part of FSU's base state appropriation. The program, which would be housed in FSU's College of Liberal Arts and Sciences, has its curriculum and syllabi already developed.

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

FSU will offer this program for an initial period of at least 7 years. At the end of the first three-year period, the program will be reviewed to determine if enrollment projections are being met. If enrollment projections are not being met, a recovery plan will be instituted to increase enrollment.

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

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

- a) The need for the advancement and evolution of knowledge

The advancement and evolution of studies aimed to assess managerial, economical, and environmental credentials of any products/projects is directed towards the study of an entire product/project lifecycle from inception, through engineering design and manufacture, to service and disposal of manufactured products. The LCFM program planned to be offered at FSU would provide the essential knowledge and help organizations and companies in coping with the increasing complexity and engineering challenges of developing and managing new or existing products for the global competitive markets, in search of resiliency, durability, and sustainability.

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

FSU fulfills a unique role as the only public comprehensive university west of the Baltimore-Washington corridor in providing educational opportunities to students in western Maryland. During fall 2019, FSU served 40.7% undergraduate minority students (FSU Office of Assessment & Institutional Research,

<https://www.frostburg.edu/academics/air/files/pdfs/fast-facts/factsheetfsu2019.pdf>).

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

N/A

2. Provide evidence that the perceived need is consistent with the [Maryland State Plan for Postsecondary Education](#).

In line with FSU's emphasis on experiential learning, the proposed Life-Cycle Facilities Management program would require two summer internships (with a recommendation for a third) and allow prior learning credits to be awarded for individuals with experience. It aligns with the institutional commitment to regional economic development and engagement, as well as with Strategy 8 of the Maryland Higher Education Commission's 2017-2021 State Plan for Postsecondary Education. The program also has the support and involvement of the local skilled trades unions and the Association of General Contractors in Washington, DC.

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

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

Life-cycle facilities management is a field that is rapidly evolving from construction management. Based upon inputs from the LCFM stakeholder group (attachment B) and the designed curriculum, graduates of this proposed program will be well-prepared for a variety of employment opportunities that include not only Construction Manager but also the following: Project Manager, Cost Estimator, Product Life-Cycle Specialist/Manager, Fleet Life-Cycle Manager, Building and Systems Analyst, and Facility Manager. Potential employers include general contractors, sub-contractors, projects and construction management firms, real estate developers, architectural engineering firms, research firms, manufacturing companies, and technology solution companies.

Need for Program: (Briefly describe the need – internal and/or external – for the proposed program and its importance to the programmatic emphases in the approved institutional mission.)

Currently across the world, there is a paramount need of leaders able to design, build, and managing companies with environment, society, and long-term sustainable development goals in mind. This need is transforming the temporary and conventional trend of doing business to a mainstream and interdisciplinary approach, often adapting project management practices to a cost and environmental efficient process. The increasing awareness of environmental issues, such as global warming and sea level rise problems, are becoming topics of discussion in communities across the globe. The growing awareness of sustainable construction's and facilities management's potential to positively impact environmental issues is pushing green practices to the forefront. As a result, more local governments are adopting green building standards and regulations by providing permitting and financial incentives for sustainable development. However, by delivering green building projects with different risk-associated impacts, the building and management process requires adjustments to the conventional methodologies.

Ultimately, the mission of the bachelor's Program in Life-Cycle Facilities Management is to provide an interdisciplinary, flexible and state-of-the-art curriculum that provides students with knowledge and marketable skills to become future leaders of construction or manufacturing related organizations worldwide.

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

Below, there is provided an outline of jobs, projecting market demand and median-pay data retrieved from the U.S. Bureau of Labor Statistics (www.bls.gov). The list below refers only to the available BLS data. Since Life-Cycle Facilities Management is an evolving field, the jobs listed below are those which the degree program would most prepare students to attain. There

are a large number of other jobs possible within firms specializing in that part of the industry, such as Product Life-Cycle Specialist/Manager, Fleet Life-Cycle Manager, Building and Systems Analyst, Data Engineer/Specialist, Facility Manager, and Project Manager.

- **Construction Managers:** 2018 employment: **471,800**. 2018 median pay: **\$93,370**. Projected employment change, 2018–28: Number of new jobs: **46,200**. Growth rate: **10 percent (Faster than average)**. Education and training: Typical entry-level education: **Bachelor's degree**.
- **Cost Estimators:** 2018 employment: **217,400**. 2018 median pay: **\$64,040**. Projected employment change, 2018–28: Number of new jobs: **18,700**. Growth rate: **9 percent (Faster than average)**. Education and training: Typical entry-level education: **Bachelor's degree**.
- **Environmental Science and Protection Technicians:** 2018 employment: **34,800**. 2018 median pay: **\$46,170**. Projected employment change, 2018–28: Number of new jobs: **3,200**. Growth rate: **9 percent (Faster than average)**. Education and training: Typical entry-level education: **Bachelor's degree**.
- **Environmental Scientists and Specialists:** 2018 employment: **85,000**. 2018 median pay: **\$71,130**. Projected employment change, 2018–28: Number of new jobs: **7,000**. Growth rate: **8 percent (Faster than average)**. Education and training: Typical entry-level education: **Bachelor's degree**.

Source of all above information: www.bls.gov

- 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.

The above jobs listed require the following educational and training needs that are specific of the LCFM program planned to be offered at FSU. Additionally, for each job listed below, an anticipated growth rate for the next 10 years is provided in percentage. Information below has been mostly retrieved from www.bls.gov.

- **Construction managers:** Construction managers plan, coordinate, budget, and supervise construction projects from start to finish. Although there are various ways to enter this occupation, it is becoming increasingly important for construction managers to have a bachelor's degree in construction science, construction management, architecture, or engineering. As construction processes become more complex, employers are placing greater importance on specialized education. Large construction firms increasingly prefer candidates with both construction experience and a bachelor's degree in a construction-related field. Employment of construction managers is projected to grow 10 percent from 2018 to 2028, faster than the average for all occupations. Construction managers are expected to be needed to oversee the anticipated increase in construction activity over the coming decade. Important skills: analytical skills, business skills, decision-making skills, leadership skills, technical skills, time-management skills, oral and writing skills. (Source: www.bls.gov).
- **Cost Estimators:** cost estimators collect and analyze data in order to estimate the time, money, materials, and labor required to manufacture a product, construct a building, or provide a service. They generally specialize in a particular product or industry. Most cost estimators need a bachelor's degree. Employment of cost estimators is projected to grow 9

percent from 2018 to 2028, faster than the average for all occupations. Overall job opportunities should be good because companies require accurate cost estimates in order to operate profitably. Important skills: analytical skills, detail-oriented skills, time-management skills. (source: www.bls.gov).

- **Environmental science and protection technicians:** Environmental science and protection technicians monitor the environment and investigate sources of pollution and contamination, including those affecting public health. Environmental science and protection technicians typically need an associate's degree or 2 years of postsecondary education, although some positions require a bachelor's degree. Employment of environmental science and protection technicians is projected to grow 9 percent from 2018 to 2028, faster than the average for all occupations. Environmental science and protection technicians should have good job prospects overall. Important skills: analytical skills, critical-thinking skills, communication skills, interpersonal skills (source: www.bls.gov).
- **Environmental scientists and specialists:** Environmental scientists and specialists use their knowledge of the natural sciences to protect the environment and human health. Environmental scientists and specialists need at least a bachelor's degree. Employment of environmental scientists and specialists is projected to grow 8 percent from 2018 to 2028, faster than the average for all occupations. Heightened public interest in the hazards facing the environment, as well as increasing demands placed on the environment by population growth, are expected to spur demand for environmental scientists and specialists. Important skills: analytical skills, problem-solving skills, interpersonal skills, communication skills. (source: www.bls.gov).
- **Sustainability Specialists:** Sustainability Specialists are now a vital part of a business organization and planning due to their potential for considerable cost savings and vital link between organization and regulation. They are active in areas such as corporate branding, public and community outreach, project implementation, procurement, business ethics and policy on the corporate side, and project design, outreach, branding and public perception on the public side. They work alongside such professionals as Sustainability Program Coordinators in aiding program implementation and may report directly to senior management or Sustainability Directors. In some cases, they are expected to act as consultants for raw materials for packaging, encourage actions on waste reduction and in some cases - organize corporate away days. Their role is largely a practical one, looking at methods of encouraging sustainability at all levels of the business. They are expected to foster a positive image about the business in the public eye and internally, encouraging sustainability thinking in the employee base at all levels and (ideally) to examine ways of cost-saving while promoting such green credentials. In some cases, they may be responsible for implementing policy based on industry regulation or state or Federal laws. Bachelor's degrees are usually required. They need good people skills as they will communicate with a variety of different stakeholders every day. It's important they have a good background in understanding environmental issues and may be expected to communicate this in layman's terms to different audiences including the vital business skills. (source: <https://www.environmentalscience.org/career/sustainability-specialist>)

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

Eight associate's degree programs and a number of lower-division certificate programs are currently offered at Maryland community colleges in the area of construction technology/management. For those who want to continue on to earn a bachelor's degree, only two

programs currently exist in the state. There are three master's level programs in related areas (e.g., Real Estate Development/Infrastructure and Construction Management).

Institution	Program	Degree Type	2016 degrees awarded
University of Maryland Eastern Shore	Construction Management/Technology	Bachelors	17
Morgan State University	Construction Management	Bachelors	8
University of Maryland College Park	Real Estate Development	Masters	24
Johns Hopkins University	Real Estate and Infrastructure	Masters	62
Morgan State University	Construction Management	Masters	0

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.

While currently there are several construction management programs at Maryland public universities (e.g., Morgan State University, the University of Maryland Eastern Shore, and the University of Maryland), no identical programs exist in the state. Additionally, several related associates' programs offered at community colleges do not meet the demand for bachelor's-prepared construction managers. Local industry leaders have also supported establishing a Life-Cycle Facilities Management program at FSU, based on recent construction projects and state regulations and expectations.

School Name	Program Name	CIP	2011	2012	2013	2014	2015	2016
Univ. of MD Eastern Shore	CONSTRUCTION MANAGEMENT/TECHNOLOGY	150201	19	28	10	24	8	17
Morgan State University	CONSTRUCTION MANAGEMENT	522001	0	1	7	6	15	8

2. Provide justification for the proposed program.

Local, state, national, and global municipalities are experiencing the consequences of ongoing and worsening climate change, including the need to design building codes to sustain conditions associated with increasingly violent weather. With this need in mind, Frostburg State University is proposing a climate-change and emergency preparedness-oriented Life-Cycle Facilities Management (LCFM) bachelor's program, which would focus

on; 1) techniques uniquely critical to responding to climate-change forecasts, and 2) innovative instruction to prepare industry leaders to properly plan and build environments that would be sustainable for structures' lifetimes.

The proposed LCFM degree would focus uniquely on the sustainability of building construction and operation. These themes would be infused into the program's curriculum: sustainable site development; water savings; energy efficiency; materials selection; and indoor environmental quality. The LCFM program's focus on construction techniques specifically designed to counter climate change, encourage emergency preparedness, and foster community resilience would establish it as unique in Maryland, improve USM's ability to respond to critical workforce shortages, and reinforce Frostburg as the educational hub in western Maryland. Additionally, the program would serve as a job creator on state, region, and local levels; possibly also helping to meet the needs of retraining the existing workforce recently displaced by the closure of the Luke Paper Mill in Luke, MD.

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 HBIs.

The data related to Historically Black Institutions and Construction Management programs is provided in the previous table. These results indicate that University of Maryland Eastern Shore and Morgan State University have Construction Management degrees but the Life-Cycle Facilities Management degree as demonstrated in the curriculum is unique and distinctive by its focus on the sustainability of building construction and operation, as well as the number of internship hours required.

The numbers of graduates from these institutions do not contribute sufficiently to meet the projected state need for the anticipated number of construction managers needed in Maryland.

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.

It is not anticipated that the proposed Life-Cycle Facilities Management program will affect the institutional identities and mission of HBIs.

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

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

The Provost engaged with a stakeholder group over a two-year planning process, which included a comprehensive group of professionals heavily involved in various aspects of industry (see attachment B). The LCFM program, which would be housed in FSU's College of Liberal Arts and Sciences, has its curriculum and syllabi already developed. Pending approval,

the university anticipates hiring faculty using enhancement funding in AY 2020, enrolling its first cohort of students in AY 2021, and graduating approximately 30 students annually.

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

This program will have the following educational objectives:

- Prepare leaders to properly plan and build environments that would be sustainable for structures' lifetimes.
 - Outline an approach to sustainability for construction and manufacturing companies.
 - Prepare graduates for a variety of employment opportunities, such as: Construction Manager, Cost Estimator, Product Life-Cycle Specialist/Manager, Fleet Life-Cycle Manager, Building and Systems Analyst, Environmental Engineer, Logistic Data Engineer/Specialist, Facility Manager, and more... Potential employers include general contractors, sub-contractors, projects and construction management firms, real estate developers, architectural engineering firms, research firms, manufacturing companies, and technology solution companies.
 - Provide a foundation for those who want to effectively lead a business project, particularly within the area of sustainable construction management, manufacturing, environmental and architectural engineering.
 - Create leaders who can balance both the pressure of short-term goals and priorities along with long-term goals and incorporate a new set of ideals centered on improving social and environmental issues in the world, while maintaining financial performance.
 - Offer the technical proficiency, financial knowledge, entrepreneurial skills, and business vision needed for success in the continuously evolving industries of construction management, manufacturing, environmental and architectural engineering.
 - Aim to integrate multiple professional requirements for bringing construction and business projects to successful completion, including cost estimating, risk management, project scheduling, project control, negotiation strategies by investigating new technologies available nowadays. Coursework also examines the essential skills of contracting, bidding, negotiating strategic business plans, and leadership.
3. Explain how the institution will:
 - a) provide for assessment of student achievement of learning outcomes in the program

The assessment plan will focus on the evaluation of student work on key assignments (artifacts) in LCFM Building Materials and LCFM Capstone Experience. The Capstone Experience is one of the last courses students take prior to graduation, and Building Materials serves as a midpoint in our curricular sequence. The artifacts are assessed anonymously by an assessment committee of faculty from the College of Liberal Arts and Sciences (CLAS). These assessments use common rubrics in both courses to allow for pre- and post-assessment. In addition, CLAS participates in the assessment of institutional learning goals through General Education assessment using institutional rubrics based on the AAC&U LEAP rubrics.

b) document student achievement of learning outcomes in the program
Annual learning outcome reports are deposited with and evaluated by the College of Liberal Arts and Sciences Assessment Council using a common report hosted by FSU's implementation of Campus Labs' Compliance Assist platform. The institution-wide Student Learning Assessment Advisory Group annually reviews the state of learning assessment campus-wide based on college-level assessment committee reports and recommendations.

Additionally, all academic programs at FSU undergo an intensive review every seven years. Student learning outcomes and the appropriateness of program learning goals and resources are a major component of this review. These reviewed are coordinated at FSU by the Office of Assessment and Institutional Research and the final reports are maintained by that office.

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

The courses required for this program are as follows. Some are existing courses at FSU. New courses are highlighted in red. Course descriptions are found in Appendix A.

Required Life-Cycle Facilities Management Courses (56 semester hours of credit):

Course	Title	Semester Hours of Credit
LCFM 103	Applied CAD	3.0
LCFM 200	Physical Sciences and Materials	4.0
LCFM 201	Building Materials	4.0
LCFM 202	Construction Methods of Structure and Infrastructures	3.0
LCFM 203	Systems Life-Cycle Cost Analysis	3.0
LCFM 204	Durability of Materials	3.0
LCFM 301	Structures in a Resilient World	3.0
LCFM 302	Facility and Maintenance Scheduling	3.0
LCFM 303	Contracts and Bidding	3.0
LCFM 304	Environmental Building Systems	3.0
LCFM 305	Project Management for Life-Cycle Facilities	3.0
LCFM 306	Estimating Life-Cycle Facilities in the Context of Climate Change Realities	3.0
LCFM 401	Sustainable Building Design	3.0
LCFM 402	Emerging Technologies in Climate Change Context	3.0
LCFM 403	Risk Management	3.0
LCFM 404	Life-Cycle Assessment of Building Materials	3.0
LCFM 405	Negotiation Strategies	3.0
LCFM 485	Life-Cycle Facilities Management Capstone	3.0

Required Geography Courses (19 semester hours of credit):

Course	Title	Semester Hours of Credit
GEOG 103	Physical Geography	4.0
GEOG 205	Meteorology	3.0
GEOG 330	Climate Change	3.0
GEOG 340	Soils	3.0
GEOG 405	Physical Climatology	3.0
GEOG 433	Surveying	3.0

Required Courses from Other Departments (18 semester hours of credit):

Course	Title	Semester Hours of Credit
IDIS 150	Life-Cycle Facilities Management	3.0
MATH 109	Statistics	3.0
MATH 119	College Algebra	3.0
ECON 201	Principles of Economics (Macro)	3.0
PHIL 102	Contemporary Ethical Problems	3.0
BLAW 291	Legal Environment of Business	3.0

Internship (12 credit hours)

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

Students in this program will be required to meet FSU's established general education program. Several courses required for the program are part of FSU's general education program.

Course	FSU GEP Component
IDIS 150	Mode of Inquiry E - FSU Colloquium – Life-Cycle Facilities Management
MATH 109	Core Skills 3 (Mathematics / Quantitative Reasoning)
MATH 119	Core Skills 3 (Mathematics / Quantitative Reasoning)
PHIL 102	Mode of Inquiry B (Humanities)
GEOG 103	Mode of Inquiry C (Natural Sciences)
ECON 201	Mode of Inquiry D (Social and Behavior Sciences)

In addition to the courses required for the program, students in the Option will complete 18 additional credits of general education in first-year and advanced composition, fine and performing arts, humanities, social and behavioral sciences, identity and difference, and interdisciplinary studies. Students in the program will have their choice of available courses for the remainder to the GEP requirements.

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

N/A

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

N/A

4. Provide assurance and any appropriate evidence that the proposed program will provide students with clear, complete, and timely information on the curriculum, course and degree requirements, nature of faculty/student interaction, assumptions about technology competence and skills, technical equipment requirements, learning management system, availability of academic support services and financial aid resources, and costs and payment policies.

FSU provides all students with sufficient information on curriculum, course and degree requirements, cost financial aid, method of delivery, technology requirements, the Canvas learning management system, and support services through the Undergraduate and Graduate Catalogs, the FSU website, FSU admissions and recruiting materials, and FSU's student information system. All undergraduate students are also provided with an 8-semester plan of study for their chosen academic program(s). First-time students take ORIE 101 Introduction to Higher Education, which provides additional information about advising, registration, and campus resources. Transfer students receive this information through advising and orientation

with the department chair or program representative. FSU also complies with the Higher Education Opportunity Act of 2008 (HEOA) related to disclosure requirements for postsecondary institutions.

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

All program materials will clearly represent the proposed program and services available. All such materials are checked by the academic department, the Admissions Office, and the Office of Publications for accuracy.

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 (as outlined in COMAR 13B.02.03.11).

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

Two full-time tenure track positions will be hired to teach the core LCFM courses with Workforce Development Initiative (WDI) funds awarded by the state of Maryland.

This program will be supported by faculty members in the Department of Geography teaching the required geography courses.

Name	Appointment Type	Terminal Degree	Rank	Status	Courses
Phillip Allen	Tenured/Tenure-Track	Ph.D. in Quaternary Science	Associate Professor	Full-Time	Geography
Tianna Bogart	Tenured/Tenure-Track	Ph.D. in Climatology	Associate Professor	Full-Time	Meteorology and Geography

This program will be supported by faculty members in the Department of Physics and Engineering teaching the required physical science and life-cycle facilities management courses.

Name	Appointment Type	Terminal Degree	Rank	Status	Courses
Eric Moore	Tenured/Tenure-Track	Ph.D. in Applied Physics	Associate Professor	Full-Time	LCFM 200 Physical Sciences and Materials
Thomas Cadenazzi	Non-Tenure Track	Ph.D. in Civil Engineering	Lecturer	Full-Time	Various LCFM courses

The courses in Business Law, Mathematics, English Composition, Philosophy, and Economics are general education courses or other high demand services courses taught by a variety of instructors in those departments.

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

Free training and professional development in pedagogy is provided by FSU's Center for Teaching Excellence which hosts a regional conference on teaching and learning annually in January, annual teaching orientations for new faculty, and periodic workshops on various topics throughout the academic year. Additionally, each of the university's academic departments are committed to supporting faculty development within the discipline through the attendance at regional and national conferences.

b) The learning management system

FSU uses Canvas as its LMS. The Office of Instructional Design and Technology provides support and training through the onboarding process for new faculty as well as regularly throughout the year.

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

N/A

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

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

Current library subscriptions cover subjects related to the new proposed academic program in Facilities Life-cycle Management, including construction engineering, materials engineering, life-cycle facilities management, and project management.

Journal Title	Database Source	Coverage
Architectural Record	Academic Search Ultimate; Business Source Complete; Humanities International Complete; Nexis Uni	1992-Present
Architectural Review	Academic Search Ultimate	2206-Present
Construction Management & Economics	Business Source Complete	1983-Present with 18-month delay
Construction Materials Industry Profiles	Business Source Complete	2006-Present
Concrete Products	Business Source Complete; Computers & Applied Sciences Complete	1997-Present
Public Management	Business Source Complete	1993-Present
Public Management Review	Business Source Complete	2001-Present with 18-month delay
Structural Concrete	Academic Search Ultimate	2012-Present with 12-month delay

In addition to the titles in the table above, the Library's Find It service that accompanies its OneSearch search engine and databases provides links to articles in open access journals, such as Construction Science, Engineering Management Research, and Project Management Research and Practice.

Additional journal titles and pricing information has been obtained to ensure access for students and faculty to all necessary library resources pending program approval.

K. Adequacy of Physical Facilities, Infrastructure and Instructional Equipment (as outlined in COMAR 13B.02.03.13)

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

The proposed Life-Cycle Facilities Management Program will be offered within existing resources. Courses will utilize dedicated laboratory space with appropriate and modern equipment. Geography facilities include environmental science and soils laboratories, as well as PC-based computer labs equipped with programs used in mapping, geography, environmental science and engineering design. Within the Physics and Engineering Department, physical science and materials science laboratories will be available for use by the Life-Cycle Facilities Management courses. These laboratory spaces are sufficient to hold the number of sections currently offered with room to accept the initial cohort of students in this program. Should the program grow, there are sufficient and appropriate laboratory spaces for additional sections to be offered.

As this program requires additional faculty positions, faculty office space will need to be identified.

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

N/A

- b) A learning management system that provides the necessary technological support for distance education

N/A

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

1. Complete [Table 1: Resources and Narrative Rationale](#). Provide finance data for the first five years of program implementation. Enter figures into each cell and provide a total for each year. Also provide a narrative rationale for each resource category. If resources have been or will be reallocated to support the proposed program, briefly discuss the sources of those funds.

TABLE 1: PROGRAM RESOURCES					
Resource Categories	Year 1	Year 2	Year 3	Year 4	Year 5
1. Reallocated Funds	44,000	45,100	46,228	47,383	48,568
2. Tuition/Fee Revenue (c + g below)	91,955	156,395	205,848	273,279	344,568
a. Number of F/T Students – In-state	6	9	13	16	19
a. Number of F/T Students – Out of state	1	2	2	3	4
b. Annual Tuition/Fee Rate In-state	9,692	9,983	10,282	10,590	10,908
b. Annual Tuition/Fee Rate Out of state	23,579	24,286	25,015	25,765	26,538
c. Total F/T Revenue (a x b)	81,731	138,419	183,696	246,735	313,404
d. Number of P/T Students – In-state	3	3	4	5	6
d. Number of P/T Students – Out of state	-	1	1	1	1
e. Credit Hour Rate – In state	284	293	302	311	320
e. Credit Hour Rate – Out of state	601	619	638	657	677
f. Annual Credit Hour Rate	12	12	12	12	12
g. Total P/T Revenue (d x e x f)	10,224	17,976	22,152	26,544	31,164
3. Grants, Contracts & Other External Sources	0	0	0	0	0
4. Other Sources	375,000	375,000	375,000	375,000	375,000
TOTAL (Add 1 – 4)	510,955	576,495	627,076	695,662	768,136

Resource Narrative:

1. Based on full-time salary of \$75,000 per faculty member and benefits of \$30,000; \$2,220 per 3-credit course for adjuncts, FICA \$176 each.

2. Tuition/Fee Revenue Assumptions – Revenue projections are based on the fall 2019 overall university proportions of in-state (84%) vs. out-of-state students (16%). The program will serve students who could be interested in the geography or engineering field who may not succeed in the advanced math skills. Since this program is expected to appeal widely to non-traditional students already working in the field, it is estimated that 25% of students enrolled will be part-time. Estimates for part-time students are based on 6 credit hours. Revenue is calculated using annual undergraduate tuition and fee schedules with a 3% increase each year.
 3. Grants, Contracts, & Other External Sources – None projected.
 4. Other Sources – MHEC enhancement funding.
2. Complete [Table 2: Program Expenditures and Narrative Rationale](#). Provide finance data for the first five years of program implementation. Enter figures into each cell and provide a total for each year. Also provide a narrative rationale for each expenditure category.

Expenditure Narrative:

TABLE 2: PROGRAM EXPENDITURES:					
Expenditure Categories	Year 1	Year 2	Year 3	Year 4	Year 5
1. Faculty (b + c below)	308,000	315,700	326,701	337,898	346,190
a. Number of FTE	2	2	2.5	2.75	2.75
b. Total Salary	220,000	225,500	233,358	241,356	247,279
c. Total Benefits	88,000	90,200	93,343	96,542	98,912
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)	17,269	17,701	18,143	18,596	19,062
a. Number of FTE	0.5	0.5	0.5	0.5	0.5
b. Total Salary	16,000	16,400	16,810	17,230	17,661
c. Total Benefits	1,269	1,301	1,333	1,366	1,401
4. Technical Support and Equipment	40,000	31,000	20,000	8,000	1,000
5. Library	7,500	8,025	8,587	9,188	9,831
6. New or Renovated Space	0	0	0	0	0
7. Other Expenses	5,000	5,000	5,000	5,000	5,000
TOTAL (Add 1 - 7)	377,769	377,426	378,431	378,683	381,083

Expenditure Narrative:

1. Faculty – years 1 and 2 - two full-time faculty members; year 3 – two full-time faculty and one adjunct; years 4 and 5 – two full-time faculty and two adjuncts
2. None
3. Half-time administrative assistant

4. Includes CAD software, SimaPro 40-user software license, three-D and blueprint printers, construction safety equipment, and miscellaneous construction equipment. Expenditures greater up front in the first three years, decreasing to maintenance level at year 5.
5. Journal subscriptions
6. None
7. Office supplies and miscellaneous construction supplies.

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

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

Faculty members at Frostburg State University are evaluated annually by a peer evaluation process that includes student evaluation of instruction data for each course. The student evaluation instrument is common to all courses at FSU and is administered by the Office of Assessment and Institutional Research. Student learning outcomes for the program are assessed as part of two courses, Building Materials and the Capstone Experience, using common departmental rubrics evaluated by a committee of departmental faculty. Learning outcomes for individual courses are assessed by individual instructors.

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.

All academic programs at FSU undergo an intensive review every seven years as required by the USM. This review covers educational and cost effectiveness, assessment of learning outcomes, and adequacy of human, capital, and fiscal resources.

Halfway through this cycle, FSU's Office of Assessment and Institutional Research collects information on enrollment and assessment activities using a midterm review template. Also, at this time, the Institutional Priorities and Resources Committee will review the program to determine if the program is meeting its enrollment projections and receiving the required resources.

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

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

FSU is a public institution committed to a campus environment that values human diversity, equity, and inclusion. FSU has a diverse undergraduate student body (40.7%) and implements a number of programs to enhance student success and increase underrepresented minority and first-generation student retention and graduation rates. The Life-Cycle Facilities Management Program will provide an option for the more economically disadvantaged students who may not have had the opportunity to take advanced mathematics in high school but have an interest in an engineering related field. It will also serve non-traditional students with experience in the construction field who want to come back and earn a bachelor's degree. We expect this new Life-Cycle Facilities Management program to attract a diverse student population, and we are committed to the success of all students enrolled in the program.

O. Relationship to Low Productivity Programs Identified by the Commission:

1. If the proposed program is directly related to an identified low productivity program, discuss how the fiscal resources (including faculty, administration, library resources and general operating expenses) may be redistributed to this program.

N/A

P. Adequacy of Distance Education Programs (as outlined in COMAR 13B.02.03.22)

1. Provide affirmation and any appropriate evidence that the institution is eligible to provide Distance Education.

N/A

2. Provide assurance and any appropriate evidence that the institution complies with the C-RAC guidelines, particularly as it relates to the proposed program.

N/A

Appendix A

Undergraduate Course Descriptions

Geography courses

GEOG 103 Physical Geography

4 cr.

Earth-sun relations, map reading and interpretations, landforms, elements of weather and climate, and climate regions. Three hrs. lecture and 2 hrs. lab. Every semester. GEP Group C.

GEOG 205 Descriptive Meteorology

3 cr.

Aspects of the atmosphere, weather variables and measurement, radiation, clouds and precipitation, atmospheric stability, air masses and severe weather. Principles of weather forecasting. Also offered as PHSC 205. Spring. GEOG 103 recommended.

GEOG 330 Global Climate Change

3 cr.

"What causes Earth's climate to change?" is one of the most important questions of our time. This course includes an evaluation of the natural and anthropogenic factors that cause a change in global and regional climates. Modern climate change, future climate scenarios, policy, and mitigation strategies will also be explored. Spring, even numbered years. *Prerequisite: GEOG103/113.*

GEOG 340 Soil: Genesis, Nature and Characterization

3 cr.

Origin and processes of soil formation, change with time and environmental factors including use, identification and delineation on the landscape, and interpretation and usage of soil surveys. Two hrs. lecture and 2 hrs. lab./field session. Not open to students who have credit for former GEOG 440. Fall. *Prerequisite: GEOG 103/113 or permission of instructor. GEOG 207 completion or co-registration strongly recommended.*

GEOG 405 Physical Climatology

3 cr.

Overview of the physical processes that define Earth's global climate. Movement of energy and water throughout the climate system, global circulation, distribution of climate types, natural and anthropogenic controls of climate, land-atmosphere COURSE DESCRIPTIONS | 169 interactions, spatial and temporal patterns, climate variability and change, and analysis of climate data. Two hrs. lecture and 2 hrs. lab. Fall. *Prerequisite: GEOG 103/113. GEOG 205/PHSC 205 and MATH 109 recommended.*

GEOG 433 Surveying and Field Techniques

3 cr.

Theory of measurements, computation and instrumentation; field work, use of Global Positioning Systems (GPS) and compilation of topographic base maps; evaluation of errors; profiling, grading, slope and grade stakes. Fieldwork will include use of a variety of instruments. One hr. lecture and 4 hrs. lab. Fall. *Recommended: GEOG 275*

Life-Cycle Facilities Management courses

LCFM 103 – Applied CAD

3 cr.

Students will be introduced to basic Computer-Aided drafting techniques to create and read construction drawings. The course prepares students to utilize AutoCAD (CAD) and Building Information Modeling (BIM) in a coordinated, integrated and consistent approach within the Architecture, Engineering and Construction Industry. Spring.

LCFM 200 – Physical Sciences & Materials**4 cr.**

Provides an effective outline of the first essential knowledge of the basic principles and concepts of Physics, Chemistry, Materials, and Earth Science. This interdisciplinary course is designed for the science and non-science major, who are interested in applied material science, in order to provide students with an understanding of some of the methods, ideas and accomplishments in the field of Physical Sciences & Materials and their role in the development of civilization. This course can be taken by any major and it has no math requirement. Fall.

LCFM 201 – Building Materials**4 cr.**

Covers the nature, composition, properties, characteristics, and applications of common building materials. The course focuses on principles for the selection of building materials, by providing background on the development and production of building materials, in view of life-cycle impacts. A laboratory experience is included and focuses on the analysis and testing of selected construction materials. Fall. *Prerequisites: LCFM 200.*

LCFM 202 – Construction Methods of Structures and Infrastructures**3 cr.**

Covers the fundamentals of construction equipment and machinery planning and utilization for large infrastructural projects and architectural components, by investigating the latest technologies, capabilities and real-world applications. Topics such as handling of construction economics, earthworks, soil and rock specification and processing are discussed. Safety procedures and life-cycle considerations are thoroughly explained. Spring.

LCFM 203 – Systems Life-Cycle Cost Analysis**3 cr.**

Estimated cost of developing, producing, deploying, maintaining, operating and disposing of a system over its life-cycle (from cradle to grave). Covers the life-cycle phases of an asset, project, or product from the acquisition to end-of-life. Methods and tools available for the selection and comparison of project alternatives that fulfill the same performance requirements but differ with respect to initial costs and operating costs, in order to select the one that maximizes net savings. Spring. *Prerequisites: ECON 201.*

LCFM 204 – Durability of Materials**3 cr.**

Durability features, methods and estimation techniques for the assessment of deterioration mechanisms of building materials, including concrete, steel, wood, asphalt, masonry and Fiber-Reinforced-Polymer (FRP) composites. The course focuses on tools and methodologies to effectively estimate materials service life and life-cycle implications. Materials diagnosis and remediation measures are investigated. Regulations, standards, specifications, guidelines, and design codes currently available and in development are also discussed. Spring. *Prerequisites: LCFM 200.*

LCFM 301 – Structures in a Resilient World**3 cr.**

Review of basic structural principles for structural systems. Basic concepts and design examples are reviewed without in-depth mathematical derivations. Understanding of national, regional, and local infrastructure policies, emphasizing the ability to analyze networks and the environmental and boundary conditions in the context of the structure or infrastructure. Ultimately, students will apply the theory of critical structures resilience to a real-world structure or infrastructure, through a course project package. Scope of the project is to design a structure or infrastructure that address the relevant technical, social, environmental, political and financial dimensions that make a structure more resilient. Fall. *Prerequisites: LCFM 201.*

LCFM 302 – Facility & Maintenance Scheduling**3 cr.**

This course covers the basics of planning and scheduling industrial and construction projects, for the continuous life-cycle improvement. Workforce and equipment productivity, optimal resources allocation, preventive maintenance, maintenance cost control, coordination of maintenance schedules with production schedules, and performance improvement are throughout discussed. Fall. *Prerequisites: LCFM 202.*

LCFM 303 – Contracts & Bidding**3 cr.**

This course covers the basics of legal aspects, administration, and logistics relevant in the construction industry. Delivery methods, construction contracts, surety bonds, insurance techniques, labor law, and essential techniques for accurate cost estimating and effective bidding are deeply investigated and discussed. Students will be exposed to codes, standards, laws, and regulations crucial for up-to-date managers willing to run a business. Fall. *Prerequisites: BLAW 291.*

LCFM 304 – Environmental Building Systems**3 cr.**

The course provides students with tools and methods for planning and building with efficient, sustainable, mechanical, and electrical systems. Concepts such as building envelope and assemblies, plumbing, fixtures and pipes, safety systems, fire safety, emergency and signal systems are discussed. Modern practices and developments within electrical, lighting, telecommunications, plumbing, HVAC, and conveyors systems are throughout investigated, in view of a sustainable design. Spring. *Prerequisites: LCFM 201.*

LCFM 305 – Project Management for Life-Cycle Facilities**3 cr.**

Students will be introduced to the efficient planning and controlling of projects. Best practices of life-cycle project management, techniques of work planning, control and evaluation to achieve project goals are investigated. Course will intensively focus on resource allocation, and performance tracking tools that allow project managers to maximize productivity and profits, by reducing waste and minimize expenditures. Spring. *Prerequisites: MATH 109.*

LCFM 306 – Estimating Life-Cycle Facilities in Context of Climate Change Realities**3 cr.**

Generation and selection of life-cycle cost-efficient solutions among valid design alternatives. Long-term performance analysis of facilities under environmental and material constraints. Methods and tools to develop life-cycle cost analyses and elaboration of technical life-cycle cost reports. A course project package is included in the course. Spring. *Prerequisites: LCFM 203.*

LCFM 401 – Sustainable Building Design**3 cr.**

Drivers and foundations of sustainable building design. Integrated planning and design, life-cycle view of projects, resource selection and optimization, protection of the natural environment, toxics and pollutants elimination, durability and quality of the construct. Fundamentals and drivers of green building policies, along with current code regulations and impacts. Evaluation of the environmental impacts of structures and infrastructures operations. Innovative design, green construction practices, and their economic feasibility. Case studies will be investigated, and a course project package is included in the course. Fall. *Prerequisites: LCFM 201.*

LCFM 402 – Emerging Technologies in Climate Change Context**3 cr.**

Current emerging technologies in construction such as robotics, drones, artificial intelligence, 3D printing, the next step for big data, and the impact of digital technology on money and markets. Related technical practices for the proper management of innovation in construction. Extensive and advanced readings, research, and writing assignments are also included. Fall. *Prerequisites: LCFM 201.*

LCFM 403 – Risk Management**3 cr.**

Introduction to Risk Management, and Resilience. Topics include: Hazards Risk Identification and Management, Risk Management for the Private Sector, Risk Approach, Mitigation Planning, and Risk Reduction Measures. Expose students to the concept of Capacity and Vulnerability, Analysis and Assessment of Risk, and Financing of Risk Reduction methods. Fall. *Prerequisites: MATH 109.*

LCFM 404 – Life-Cycle Assessment of Building Materials**3 cr.**

Environmental sustainability metrics and tools to qualitatively and quantitatively assess the environmental credentials accumulated during any project and/or product life-cycle. This course enables students to develop a full understanding of the frameworks, principles, techniques, and applications of life-cycle assessment (LCA). A course project package is included in the course in order to expose students to apply

the knowledge acquired from theory through the use of professional software and databases that address social and environmental impacts. Spring. *Prerequisites: LCFM 201.*

LCFM 405 – Negotiation Strategies

3 cr.

This course is structured in a way to offer hands-on and in-depth information on business negotiation strategies. The course will provide students with practical real-world examples, to better explain many of the negotiation concepts and offers a skills-based approach to complex, yet commonly occurring negotiating situations, such as negotiating with agents, mediation and arbitration, negotiating via email and conference calls, negotiating with competitor companies, and of course, negotiating cross culturally. Spring. *Prerequisites: LCFM 303.*

LCFM 485 – Life-Cycle Facilities Management Capstone

3 cr.

Finalization of the theoretical and practical knowledge gained through the four years. Culmination of prior course work in Life-Cycle Facilities Management. Utilization of modern software, methodologies, and design tools to structure, design, operate, maintain, and dispose of a project from cradle to grave. Spring. *Prerequisites: LCFM 204, LCFM 301, LCFM 302, LCFM 305, LCFM 306, and permission of program coordinator.*

LCFM 495 – Life-Cycle Facilities Management Internship

6 cr.

Supervised field experience for Life-Cycle and Facilities Management majors. Repeatable for up to 12 credits. *Prerequisites: LCFM 204, LCFM 301, LCFM 302, LCFM 305, LCFM 306, and permission of program coordinator.*

Mathematics courses

MATH 109 Elements of Applied Probability and Statistics

3 cr.

For the non-math major; less rigorous than MATH 380. Elementary probability theory; collection, organization and analysis of data; descriptive statistics; the normal and binominal distributions; introduction to inferential statistics; and applications. Every semester. *Prerequisite: a passing score on the Mathematics Placement test administered by the University or DVMT 095. MAY NOT BE USED TO SATISFY THE REQUIREMENTS FOR A MAJOR OR MINOR IN MATHEMATICS. MAY BE USED TO FULFILL CORE SKILL 3.*

MATH 110 Honors: Elements of Appl. Probability & Statistics

3 cr.

Introduction to statistics, with emphasis on probability theory and inferential statistics. More rigorous and broader than MATH 109/209. Use of the computer as a tool in statistical analyses. Probability theory, sampling distributions, estimation, hypothesis testing, parametric and nonparametric tests, correlation, regression and analysis of variance. Written research project required. Credit cannot be earned for both MATH 109/209 and MATH 110/219. Spring. *Prerequisite: acceptance into the University Honors Program or permission of the instructor. MAY NOT BE USED TO SATISFY THE REQUIREMENTS FOR A MAJOR OR MINOR IN MATHEMATICS. MAY BE USED TO FULFILL CORE SKILL 3.*

MATH 119 College Algebra

3 cr.

Functions and their graphs, inverse functions, solutions of equations and inequalities, polynomial and rational functions, exponential and logarithmic functions, systems of equations and matrices. Every semester. *Prerequisite: A passing score on the Mathematics Placement Test administered by the University or a grade of B or better in DVMT 100/099. MAY NOT BE USED TO SATISFY THE REQUIREMENTS FOR A MAJOR OR MINOR IN MATHEMATICS. MAY BE USED TO FULFILL CORE SKILL 3.*

Philosophy courses

PHIL 102 Contemporary Ethical Problems

3 cr.

Ethical issues such as abortion, euthanasia and physician-assisted suicide, the death penalty, censorship of pornography and hate speech, sex and marriage, social and economic justice, world hunger and global poverty, the environment and the treatment of animals. Every semester. GEP Group B.

Economics courses

ECON 201 Principles of Economics (Macro)

3 cr.

An introduction to Principles of Economics focusing primarily on the forces determining the economy-wide levels of production, employment, and prices. Examines monetary and fiscal policy and alternative views of how the economy should be managed. Every semester. GEP Group D.

ECON 211 Honors: Principles of Macroeconomics

3 cr.

An introduction into the forces at work in the national economy including income, employment, and the monetary system. A variety of written research assignments on current topics in macroeconomics required. Credit cannot be earned for both ECON 201 and 211. Fall. *Prerequisite: acceptance into the Honors program or permission of the instructor.* GEP Group D.

Business Law

BLAW 291 Legal Environment of Business

3 cr.

The workings and importance of legal institutions; the law as a system of social thought and social action. The analysis and study of the law of contracts, agency, employment, negotiable instruments, real property, personal property, sales and insurance. Credit cannot be earned for both BUAD 291 and BLAW 291. Every semester. *Additional prerequisite or corequisite: MGMT 110 for all ACCT, BUAD, and ECON majors (Business Economics Concentration) only.*

Appendix B: Life Cycles Facilities Management Stakeholder Group

Name	Position	Organization
Phillip Allen	Associate Professor/Geography	Frostburg State University
Carl Belt	Owner and Operator	The Belt Group
Sara Beth Bittinger	Interim Assistant VP for Analytics/Office of the Provost	Frostburg State University
Aaron Bittner	Operations Professional Arts/Theatre and Dance	Frostburg State University
Tianna Bogart	Associate Professor/Geography	Frostburg State University
Robert Boyce	Director Physical Plant/Facilities Management	Frostburg State University
John Brewer	Assistant Director/Planning and Construction/Physical Plant	Frostburg State University
Thomas Cadenazzi	Lecturer/College of Liberal Arts and Sciences	Frostburg State University
Michael Flinn	Associate Professor/Computer Science and Information Technologies	Frostburg State University
Scott Fritz	Associate Dean/College of Liberal Arts and Sciences	Frostburg State University
Greg Heflin	Principal, Development & Construction	Brickstone Companies

Former: Jason Hill	Former: Assistant Director of Maintenance/Physical Plant	Formerly associated with Frostburg State University
Kim Hixson	Dean, College of Liberal Arts and Sciences	Frostburg State University
Jason Howard	Manager of Specifications/Physical Plant	Frostburg State University
Robert Larivee	Professor/Chemistry	Frostburg State University
Michael Mathias	Interim Associate Provost/Office of the Provost	Frostburg State University
Brian Mattingly	President, Owner and Operator	Goldin and Stafford, LLC
Stephen Mayoryk	Senior Project Manager	Whiting-Turner Contracting
Eric Moore	Associate Professor/Physics and Engineering	Frostburg State University
Brett Pastorius	VP of Project Management	Clemens Construction Company, Inc.
Thomas Sigerstad	Associate Dean/College of Business	Frostburg State University
Linda Steele	Program Coordinator/College of Liberal Arts and Sciences	Frostburg State University
Tom Sullivan	Transportation Planner	Maryland Department of Transportation
Elizabeth Throop	Provost/VP for Academic Affairs	Frostburg State University
John Walewski	Associate Professor of Practice/Zachry Department of Civil Engineering	Texas A&M University



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

TOPIC: Salisbury University: Bachelor of Science in Integrated Science

COMMITTEE: Education Policy and Student Life

DATE OF COMMITTEE MEETING: Tuesday, May 5, 2020

SUMMARY: Salisbury University is pleased to submit a proposal for a Bachelor of Science degree in Integrated Science. The Integrated Science B.S. provides a pathway for students who discover completion barriers in traditional STEM disciplinary majors, learn that a clear post-transfer pathway to completion is difficult, or desire a cross-disciplinary STEM degree. Traditional STEM disciplines are often challenging, particularly for transfer students and veterans, because of the curriculum's sequential nature. Yet, in the latest report on the U.S. Science and Engineering workforce, the Bureau of Labor Statistics estimates growth in STEM occupations will expand much faster than non-STEM occupations. The Integrated B.S. will enable S.U. students another avenue to obtain these jobs. Indeed, a leading job search website yields ~30,000 jobs related to "integrated science," 1,500 in Maryland.

The Integrated Science B.S. is flexible with four core courses, four to five upper-level courses, and a capstone requirement. Graduates will demonstrate knowledge and skills central to the chosen integrated academic disciplines; use formal techniques and methodologies of abstraction to create methods to solve real-world problems; apply their learned knowledge to cross-disciplinary problems as part of a team; and effectively pursue careers to meet growing demand for scientists and technologists. SU is well-prepared in terms of faculty expertise and facilities to deliver this unique undergraduate program, which will launch graduates into successful careers in a diversity of public and private organizations.

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 fees revenue.

CHANCELLOR'S RECOMMENDATION: That the Committee on Education Policy and Student Life recommend that the Board of Regents approve the proposal from Salisbury University to offer the Bachelor of Science in Integrated Science.

COMMITTEE RECOMMENDATION:

DATE: May 5, 2020

BOARD ACTION:

DATE:

SUBMITTED BY: Joann A. Boughman

301-445-1992

jboughman@usmd.edu



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April 6, 2020

Dr. Jay A. Perman, Chancellor
University System of Maryland
3300 Metzert Rd.
Adelphi, MD 20783

Dear Chancellor Perman,

On behalf of President Charles A. Wight, the faculty, and the entire Salisbury University (SU) community, I am requesting approval to add a new instructional program at SU. Our institution is seeking permission to offer a Bachelor of Science in Integrated Science. The complete proposal for a new instructional program is attached for your review.

If you have any questions, please contact me at 410 548-3374.

Sincerely,

Karen L. Olmstead, Ph.D.
Provost and Senior Vice President
for Academic Affairs

Enclosure

kg

- cc Dr. Charles A. Wight, President, Salisbury University
- Dr. Kara Owens, Associate Vice President for Planning and Assessment
- Dr. Antoinette Coleman, Associate Vice Chancellor for Academic Affairs, USM

UNIVERSITY SYSTEM OF MARYLAND INSTITUTION PROPOSAL FOR

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

Salisbury University
Institution Submitting Proposal

Bachelor of Science in Integrated Science
Title of Proposed Program

Bachelor of Science Degree
Award to be Offered

Fall 2020

Projected Implementation Date

490200.00

Proposed HEGIS Code

41.9999

Proposed CIP Code

Henson Dean Office

Department in which program will be located

Richard T. Wilkens

Department Contact

410 543-6022

Contact Phone Number

rtwilkens@salisbury.edu

Contact E-Mail Address



Signature of President or Designee

4/6/20

Date

A. Centrality to Institutional Mission and Planning Priorities

1. Program Description

The Richard A. Henson School of Science and Technology at Salisbury University (SU) is pleased to submit a proposal for a new Bachelor of Science degree in Integrated Science. The B.S. in Integrated Science will provide students pursuing careers in a variety of fields with a course of study that balances a breadth of core fundamentals with two or more integrated STEM fields. The B.S. in Integrated Science will provide the knowledge and skills necessary to compete in rapidly-expanding industries that operate in a multifaceted and ever-evolving technological environment. The major accommodates students who wish to develop programs of study in two or more STEM disciplines or create a major in a STEM area of study not offered by any department at Salisbury University. Students will be able to create an individual and flexible major with a foundation in science and technology that is best suited to their interests or career goals. Most importantly, this program gives students the opportunity to integrate information across STEM disciplines fostering a more complete understanding of the chosen area(s) of study. In addition to Henson School of Science and Technology disciplines, students can include courses from other disciplines, e.g., environmental health science, environmental studies, exercise science, health science, information systems, or medical laboratory science. The addition of such courses would enable students to focus on cross-disciplinary areas such as environmental monitoring, renewable energy, human ecology, health information technology, adaptive physical education technology, et al. This unique degree program provides the rigorous technical background and experience to rapidly accelerate graduates into emerging roles across a wide diversity of careers in the public and private sectors. A degree in Integrated Science is a highly employable major according to data provided by the National Association of Colleges and Employers, and graduates will have an opportunity to explore numerous employment options in STEM-related career fields. This degree program, once approved, will be available to students beginning in August 2020 and most students will complete the Bachelor of Science in Integrated Science degree in four years.

2. How Proposed Program Supports Institution's Strategic Goals

The proposed Integrated Science B.S. program supports Salisbury University's mission to "empower our students with the knowledge, skills, and core values that contribute to active citizenship, gainful employment, and life-long learning in a democratic society and interdependent world" and to "actively contribute to the local Eastern Shore community and the educational, economic, cultural, and social needs of our State and nation" (SU's Mission and Values, 2019). The Integrated Science B.S. program provides students with a multidisciplinary

background in science, technology, engineering, and mathematics to prepare them for the demands of STEM career fields.

While its administrative home will be in the Henson School of Science and Technology Dean's Office, the program utilizes an individual-designed, multi-disciplinary approach to allow students to pursue "a broad array of ideas and perspectives" as promoted in the University's mission. This approach will help students achieve excellence, envision their future as scientists, grow intellectually, and pursue career, leadership, and graduate school opportunities.

3. Brief Narrative Describing Adequate Financing of Program

Because this proposal incorporates existing courses into the new major, no new resources are required for the new Integrated Science B.S. program. Salisbury University's existing faculty will largely be able to offer the courses as part of their regular teaching load; therefore, it will not require any additional administrative support or increased funding. Future program growth may necessitate additional faculty. Advising support will be critical to the success of this program but that capacity is currently available within our Academic Advising Center. If the program were to grow significantly, more advising support would be necessary.

4. Commitment to Adequate Continued Support

Salisbury University is committed to providing additional administrative, financial, and technical support to match increase in student demand. We also pledge to provide the appropriate support to enable all students officially enrolled in the program to complete their degree, even in the unlikely event we phase out the approved degree and stop admitting new students. Nonetheless, the proposed program is expected to attract a new set of students who are interested in designing their own STEM major and pursuing careers which require a broad skillset. Its unique, interdisciplinary curricular nature will draw students from the region and beyond.

For more financial details, see section L below.

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

1. Demonstrate Demand and Need for the Program

Integrated Science is an ideal way to prepare for interdisciplinary fields, like environmental science, ocean sciences, and neuroscience. This program is also a good choice for students interested in several science fields but who are unsure about choosing a major. It also provides a broader background in science that is especially useful in careers such as science journalism,

teaching, law and biomedical ethics. Graduates of Integrated Science programs are in demand on their own. As of the date of this proposal, the job-search firm Indeed found that there are over 32,000 listings for Integrated Science jobs in the United States and the demand continues to grow.¹

2. Consistency with Maryland State Plan for Postsecondary Education

The State directs its postsecondary institutions to “respond nimbly to changes in industries, and programs must support student development in critical thinking, problem-solving, and communication skills throughout the curriculum,” as indicated in Goal #5 of the Maryland State Plan for Postsecondary Education (2017-2021).² The Integrated Science degree will advance this goal by providing a unique high-quality program that facilitates “lifelong learning, preparing students to enter the workforce and advance in their careers, fostering cultural understanding, emphasizing ethical principles and practices in personal and professional interactions, and conveying the importance of contributing to the common good as a citizen of the local, national, and global communities.”³ The program prepares students to be effective scientists who can be competitive in an area of expanding demand.

In addition, this proposed Integrated Science degree program targets a very specific subpopulation that is a focus of the current Maryland State Plan for Postsecondary Education – veterans.⁴ Veterans often have difficulty completing their degree in a reasonable period because the academic credits they earn during their time in-service do not naturally align with traditional academic disciplines/majors. Many veterans arrive at institutions like Salisbury University with as many as 60 credits of science and technology coursework but are often disappointed and frustrated to learn that much of that credit will not count toward any particular disciplinary major. Because the Integrated Science program is designed to be flexible and does not have many prescribed required courses, veterans will be able to achieve a STEM degree in a shorter period than current practice allows.

Similarly, students interested in science careers who are transferring to SU may find that the Integrated Science program provides a more manageable pathway to a B.S. degree within two years as compared to more sequential majors in several traditional science disciplines.

¹ <https://www.indeed.com/q-Integrated-Science-jobs.html>

² <https://bit.ly/2GgJnw8>, pg. 51

³ <https://bit.ly/32DzvpX>, pg. 19

⁴ <https://bit.ly/2GgJnw8>, pgs. 15, 44-45, 54

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

As of the date of this proposal, there are currently 1,447 integrated scientist jobs in Maryland listed on Indeed.⁵ Upon graduation, a student with this major should be able to apply for entry-level scientist or analyst positions. Approximately 40% of the jobs listed seeking “integrated science” ask for a bachelor’s degree as a requirement. The remaining 60% generally require an advanced degree or “a bachelor’s degree plus equivalent work experience.”

D. Reasonableness of program duplication

Salisbury University is one of only two USM institutions that serve the residents of the Eastern Shore of Maryland and the other, the University of Maryland Eastern Shore, does not offer an undergraduate degree in integrated science. Currently, no other USM institutions offer an undergraduate degree in integrated science.

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

HBIs in Maryland do not offer an undergraduate degree in integrated science.

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

HBIs in Maryland do not offer an undergraduate degree in integrated science.

G. Adequacy of curriculum design and delivery to related learning outcomes

1. How the Proposed Program was Established; Faculty Oversight

A full course listing with course titles and descriptions is provided in Appendix A. These courses were chosen to include stated industry needs of mathematics, computer programming, and various science disciplines. The unique design of this program combines a breadth of knowledge developed from a group of fundamental courses and the integration of two or more integrated STEM fields. By integrating specific science disciplines, students in the program will better develop an array of critical thinking, communication, and leadership aptitudes, which are broadly applicable in a rapidly changing technological environment and interdependent society.

The Integrated Science Major will be housed in the Henson School of Science and Technology Dean’s Office, and will generally be managed by the Associate Dean, Dr. Mark W. Muller. However, chairs of departments with courses selected for a student’s integrated science curriculum will be consulted as necessary: Dr. Matthew Bailey, Physics; Dr. Les Erickson,

⁵ <https://www.indeed.com/jobs?q=Integrated+Science&l=Maryland>

Biological Sciences; Dr. David Rieck, Chemistry; Dr. Donald Spickler, Mathematics and Computer Science; Dr. Dan Harris, Geography and Geosciences.

The Integrated Science B.S. program core requires 34 course credits, with additional general education courses, and electives.

2. Educational Objectives and Learning Outcomes

The Integrated Science B.S. program follows a student-centered learning approach that is the hallmark of Salisbury University⁶ and focuses on principles, models and techniques that scientists use to perform their jobs effectively and support a broad array of applications.

Program objectives for graduates of the B.S. in Integrated Science are: 1) demonstrate the knowledge and skills central to the chosen integrated academic disciplines; 2) use formal techniques and methodologies of abstraction to create methods to solve real-world problems; 3) apply acquired knowledge to cross-disciplinary problems as part of a project team; and 4) effectively and competitively pursue careers to meet the growing demand for scientists and technologists. Before any program opens for admission, SU updates all curricular, course and degree requirements in our catalog and online (in both narrative and checklist formats). The Academic Advising Center prepares all advisors to assist incoming students with all academic programs; furthermore, the Academic Advising Center dedicates one of their advisors as a liaison to the Henson School of Technology, the home of the proposed degree. Our catalog and website make available all pertinent information to prospective and current students regarding academic and student support, SU's learning management system, financial aid resources and costs and payment policies.

3. Assessment and Documentation of Student Learning Outcomes: see Section M below.

4. List of Courses with Credit Hours and Course Descriptions

Overall Accounting of Credits

<u>Courses</u>	<u># of Credits</u>
Core – Integrated Science Major	13-16
Upper Level – Integrated Science Major	15-20
Capstone – Integrated Science Major	6
General Education	29-31
Free Electives	47-57
TOTAL	120 credits (minimum)

⁶ <https://www.salisbury.edu/discover-su/mission-values.aspx>

Integrated Science Major Courses: Required courses include the following (see Appendix A for course descriptions).

CORE COURSES (4 Courses)

Complete the following:

A. Select two courses from the following (courses must be from two different areas):

BIOL 210 – Biology: Concepts and Methods	4
BIOL 211 – Microbiology	4
CHEM 121 – General Chemistry I	4
ENGR 100 – Introduction to Engineering Design	3
ENGR 110 – Statics	3
GEOG 104 – Earth and Space Science	4
GEOG 105 – Introduction to Physical Geography	4
GEOG 111 – Introduction to Oceans and Coasts	3
GEOG 150 – Environmental Science: Concepts and Methods	4
GEOG 201 – Weather and Climate	4
GEOL 103 – Introduction to Physical Geography	4
PHYS 108 – Introduction to Astronomy	4
PHYS 109 – Principles of Astronomy	3
PHYS 121 – General Physics I	4
PHYS 221 – Physics I	4

B. Select one course from the following:

MATH 155 – Modern Statistics with Computer Analysis	3
MATH 198 – Calculus I for Biology and Medicine	4
MATH 201 – Calculus I	4
MATH 210 – Introduction to Discrete Mathematics	4
MATH 216 – Statistical Thinking	4

C. Select one course from the following:

COSC 117 – Programming Fundamentals	4
COSC 118 – Introductory Scientific Programming	4
COSC 120 – Computer Science I	4

Total Core Credits

13-16 credit hours

CAPSTONE COURSES (6 credits)

Complete a minimum of 6 semester hours from the following:

BIOL 415 – Research in Biology	3
BIOL 420 – Readings in Biology	3
BIOL 450 – Internship	3
BIOL 490 – Special Topics in Biology	4
CHEM 310 – Intermediate Chemistry Research	3
CHEM 403 – Principles of Chemical Research	3
CHEM 410 – Chemical Research	3
CHEM 413 – Internship/Co-Op in Chemistry	3
COSC 380 – Internship	3
COSC 385 – Directed Study	4
COSC 390 – Undergraduate Research Project	3
DSCI 470 – Research Methods in Data Science	3
DSCI 490 – Capstone Project	3
ENGR 395 – Intermediate Engineering Research	3
ENGR 490 – Research in Engineering	2
GEOG 414 – Research and Writing	3
GEOG 415 – Selected Problems	3
GEOG 460 – Internship	3
MATH 380 – Internship	3
MATH 385 – Directed Study	4
MATH 390 – Undergraduate Research Project	3

PHYS 450 – Internship/Co-Op in Physics	3
PHYS 470 – Senior Seminar	1
PHYS 490 – Research in Physics	2
Total	6 credit hours

UPPER-LEVEL COURSES (4-5 courses)

Complete a minimum of 15 semester hours in approved 300-/400-level STEM courses.

Total	15-20 credit hours
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GENERAL EDUCATION COURSES: The following courses are required to meet the general education requirements for Salisbury University. In order satisfy the general education requirements, Salisbury University students must take courses from five different groups.

General Education Requirements

Group I: English Composition and Literature (2 Courses)

A. ENGL 103 (C or Better) or HONR 111	4
B. Literature course (from either ENGL or MDFL Depts.)	4

Group II: History (2 courses)

A. HIST 101, 102, or 103	4
B. HIST 101, 102, 103 or a HIST course above 103	4

Group III: Humanities and Social Sciences (3 courses)

A. ART, CMAT, DANC or THEA, MDFL, MUSC, PHIL, HONR 211	4
B. ANTH, CADR, ECON or FINA, ENVR, Human GEOG, POSC, PSYC, SOCI, HONR 112	3/4
C. Select one course from either Group IIIA or IIIB (course must be from a different area than previously selected)	3/4

Group IV: Natural Science, Math or Computer Science (4 courses)

A. Select courses with laboratories from at least two of the following four areas: BIOL, CHEM, GEOL or Physical GEOG, PHYS	4
B. Select one additional course (need not be a lab) from Group IVA or ENVH or ENVR or COSC or MATH or HONR 212	3/4
C. Select one course from MATH	3/4

Group V: Health Fitness (1 course)

FTWL 106 – Personalized Health/Fitness	3
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Total general education credit hours	43 - 47 credit hours
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5. Specialized accreditation or graduate certification requirements: N/A
6. Contracting with another institution or non-collegiate organization
There are no contracts with other institutions or organizations.
7. Assurance that SU provides clear, complete and timely information to students
8. Assurance that advertising, recruiting and admission material are clear and accurate

All publications, including marketing, catalog and website admissions pages are vetted by the Marketing and Communications Department at SU, which fact-checks all submissions.

H. Adequacy of Articulation: N/A

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

1. Narrative of Faculty Demonstrating Quality of Program Faculty

The integrated science courses will be taught by SU’s faculty from the Henson School of Science and Technology. Collectively, these faculty have decades of experience teaching undergraduates.

Table of Faculty Resources. (note: all faculty are regular state employees, not contractual)

	Faculty Member	Terminal Degree	Field	Degree-granting Institution	Academic Rank	Full- or Part-Time	Courses overseen
Biological Sciences	Les Erickson	Ph.D.	Molecular and Cell Biology	Univ of Texas Dallas	Professor and Chair of Biological Sciences	FT	All BIOL courses
Chemistry	David Rieck	Ph.D.	Chemistry	Univ of Wisconsin Madison	Professor and Chair of Chemistry	FT	All CHEM courses
Geography and Geosciences	Daniel Harris	Ph.D.	Geoscience Education	Univ of Maryland College Park	Associate Professor and Chair of Geography/ Geosciences	FT	All GEOG and GEOL courses
Mathematics and Computer Science	Donald Spickler	Ph.D.	Pure Mathematics	Univ of Virginia	Professor and Chair of Mathematics and Computer Science	FT	All COSC, DSCI, and MATH courses
Physics	Matthew Bailey	Ph.D.	Physics	Utah State Univ	Associate Professor and Chair of Physics	FT	All ENGR and PHYS courses
	Mark W. Muller	Ph.D.	Mechanical Engineering	Univ of Hawai'i Manoa	Associate Professor and Associate Dean of the Henson School	FT	Program Coordinator

2. Demonstrate Pedagogical Training for Faculty

The Office of Instructional Design & Delivery provides professional development in pedagogy and instructional technologies. They provide ongoing online and in-person workshops on the

Canvas learning managements system, plagiarism detection service, lecture capture software and more. In their weekly newsletter during Fall and Spring semesters, they provide best practices for traditional, hybrid and online learning environments. Additional opportunities are provided through the Faculty Development Committee and our Faculty Learning Communities such as the Distance Education FLC and the Scholarship of Teaching and Learning FLC. Finally, the institution hosts two annual faculty development events – one in August at the beginning of the semester (our most recent focused on Effective Teaching Strategies) and a Teaching & Learning conference in the Spring where faculty present on evidence-based practices and their experiences at SU.

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

Salisbury University Libraries have existing resources to support completely the new Integrated Science major. In relation to journal and newspaper articles, SU has a number of relevant titles through electronic access via our online database subscriptions, including (but not limited to): Academic Search Complete; Business Source Premier; EconLit; JSTOR; ProQuest Newspapers; Science Direct; and Web of Science. In regard to monographic titles, SU has a significant number of titles that would support this major and is frequently adding more. SU's ability to share resources within the USM system will also greatly support our students in the rare occasion that we might not have the exact title in-house that they would want or need, and these students would generally gain access to that title within the same week they requested it.

In sum, no new library resources are directly required to support the Integrated Science major. Existing resources that relate to integrated science will be purchased or acquired in the future as needed once the major is officially implemented. Active and ongoing communication from faculty teaching these courses regarding relevant resources is strongly recommended, with particular emphasis placed on areas of particular curricular focus along with information regarding newly released titles.

K. Adequacy of Physical Facilities, Infrastructure and Instructional Resources as outlined in COMAR 13B.02.03.13.

Delivery of the program will be in existing space and is not contingent on additional resources. Incremental growth of the program will support equipment maintenance and updates. We do not currently have plans to offer this program through distance learning.

Adequacy of Financial Resources as outlined in COMAR 13B.02.03.14.

TABLE 1: RESOURCES for the Integrated Science B.S. at Salisbury University					
Resources Categories	(Year 1 - FY21)	(Year 2 -FY22)	(Year 3 -FY23)	(Year 4 -FY24)	(Year 5 -FY25)
1.Reallocated Funds	\$0	\$0	\$0	\$0	\$0
2. Tuition/Fee Revenue (c+g below)	\$157,788	\$195,318	\$244,732	\$285,375	\$349,272
a. #F.T. Students	15	18	22	25	30
b. Annual Tuition/Fee Rate (FY20 Resident rate)*	\$10,044	\$10,245	\$10,450	\$10,659	\$10,872
c. Annual Full Time Revenue (a x b)	\$150,660	\$184,410	\$229,900	\$266,475	\$326,160
d. # Part Time Students	2	3	4	5	6
e. Credit Hour Rate*	\$297	\$303	\$309	\$315	\$321
f. Annual Credit Hours	12	12	12	12	12
g. Total Part Time Revenue (d x e x f)	\$7,128	\$10,908	\$14,832	\$18,900	\$23,112
3. Grants, Contracts, & Other External Sources	\$0	\$0	\$0	\$0	\$0
4. Other Sources	\$0	\$0	\$0	\$0	\$0
TOTAL (Add 1 - 4)	\$157,788	\$195,318	\$244,732	\$285,375	\$349,272

*Figured with a 2% Annual Increase

TABLE 2: EXPENDITURES – for the Integrated Science B.S. at Salisbury University					
Expenditure Categories	(Year 1-FY21)	(Year 2-FY22)	(Year 3-FY23)	(Year 4-FY24)	(Year 5-FY25)
1. Total Faculty Expenses (b + c below)	\$94,292	\$96,178	\$122,626	\$125,079	\$127,580
a. # FTE	1.00	1.00	1.25	1.25	1.25
b. Total Salary (plus 2% increase each year)	\$70,896	\$72,314	\$92,200	\$94,044	\$95,925
c. Total Benefits (33% of salary)	\$23,396	\$23,864	\$30,426	\$31,035	\$31,655
2. Total Administrative Staff Expenses (b + c below)	\$0	\$0	\$0	\$0	\$0
a. # FTE	0	0	0	0	0
b. Total Salary	\$0	\$0	\$0	\$0	\$0
c. Total Benefits	\$0	\$0	\$0	\$0	\$0
3. Total Support Staff Expenses (b + c below)	\$0	\$0	\$0	\$0	\$0
a. # FTE	0	0	0	0	0
b. Total Salary	\$0	\$0	\$0	\$0	\$0
c. Total Benefits	\$0	\$0	\$0	\$0	\$0
4. 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)	\$94,292	\$96,178	\$122,626	\$125,079	\$127,580

L. Adequacy of provisions for evaluation of program as outlined in COMAR 13B.02.03.15.

The Henson School of Science and Technology has a long tradition of assessment and accreditation. Within the Henson School's Departments of Mathematics and Computer Science, Biological Sciences, Geography and Geosciences, Chemistry, and Physics, all faculty members are evaluated every year by their department chairs and all degree programs undergo comprehensive review every seven years. With guidance from the SU's Office of University Analysis, Reporting, and Assessment, course and program-based assessments are being developed at the start. Thus, the curriculum, program faculty and other resources, and student learning outcomes will be routinely evaluated through the annual and periodic review assessment cycles. In addition, once the

Integrated Science B.S. program is launched, the program and courses will be evaluated using student surveys and program committee reviews on a regular basis.

M. Consistency with the State’s minority student achievement goals as outlined in COMAR 13B.02.03.05 and in the State Plan for Postsecondary Education.

Any student meeting the SU admissions requirements can choose to pursue the B.S. in Integrated Science. The program will work to help all accepted students improve their workplace competitiveness and reach their professional goals, an aim consistent with the State's minority student achievement goals.

More specifically, Strategy 7 of the Maryland State Plan for Postsecondary Education (2017-2021) calls on universities to enhance career advising and planning services and integrate them explicitly into academic advising and planning.⁷ The program will reach out to undeclared undergraduate students at Salisbury University to inform them of the wide array of career opportunities available with the Integrated Science major.

Strategy 8 of the State plan calls on universities to “develop new partnerships between colleges and businesses to support workforce development and improve workforce readiness.”⁸ As the only undergraduate program of its kind in the USM, the Integrated Science B.S. program will result in new public-private partnerships for students in this program. The program requires that students complete a senior capstone project, and the project can be completed through collaborations with local, state, federal, and private sectors.

N. Relationship to low productivity programs identified by the Commission: The proposed program is not directly related to an identified low productivity program.

O. Adequacy of Distance Education Programs as outlined in COMAR 13B.02.03.22: No distance learning is proposed at this time.

Appendix A

B.S. Integrated Science - Salisbury University Course Descriptions

Core Courses

BIOL 210: BIOLOGY: CONCEPTS AND METHODS (4 credit hours)

Introduction to the study of biology, focusing on how biologists know things and study the world of life, with emphases on cell biology, genetics, ecology and evolution. First course required for biology majors. Four hours lecture/laboratory, two hours online per week.

⁷ <https://bit.ly/2GgJnw8>, pg. 60

⁸ <https://bit.ly/2GgJnw8>, pg. 66

BIOL 211: MICROBIOLOGY (4 credit hours)

Fundamental course in the study of microorganisms and their activity, with emphasis on bacteria.

Prerequisite: BIOL 101 or 210 or 215. Two hours lecture, four hours laboratory per week.

CHEM 121: GENERAL CHEMISTRY I (4 credit hours)

Study of fundamental laws of chemistry and atomic structure emphasizing quantitative relationships.

Prerequisite: Two years high school algebra and chemistry, or CHEM 100. Three hours lecture, one three-hour laboratory per week.

COSC 117: PROGRAMMING FUNDAMENTALS (4 credit hours)

Introductory course in computer programming, which involves solving problems by designing, implementing and testing algorithms. Emphasis is on problem solving through the use of algorithms and learning to develop computer programs that are reliable, well-documented, and correct. Implementation is done in object-oriented based languages concentrating on fundamental instructions and the development and implementation of events, methods, and functions. Three hours lecture, two hours lab per week.

COSC 118: INTRODUCTORY SCIENTIFIC PROGRAMMING (4 credit hours)

Introduction to program design and development. Programs focus on development of applications for science including applications related to GIS. The object-oriented approach is emphasized throughout. No previous programming experience is required. Three hours lecture, two hours lab per week.

COSC 120: COMPUTER SCIENCE I (4 credit hours)

Step-by-step approach to problem solving, modular structured design, and structured programming in C++. Emphasizes production of readable, well documented, efficient, tested and correct programs. Includes time intensive assignments. Prerequisite: C or better in COSC 117 or permission of department. Three hours lecture, two hours laboratory per week.

ENGR 100: INTRODUCTION TO ENGINEERING DESIGN (3 credit hours)

Introduction to the art and science of engineering design. Students work in teams to design, manufacture, assemble and test a product. Examples of products include a postal scale, solar cooker and human-powered water pumping systems. CAD and modeling software will also be used. Four hours lecture/activity per week.

ENGR 110: STATICS (3 credit hours)

The equilibrium of stationary bodies under the influence of various kinds of forces. Forces, moments, couples, equilibrium, trusses, frames and machines, centroids, moment of inertia, beams and friction. Vector and scalar methods used to solve problems. Prerequisite: PHYS 221. Prerequisite/Corequisite: MATH 202. Three hours per week.

GEOG 104: EARTH AND SPACE SCIENCE (4 credit hours)

An introductory course in earth and space science for prospective elementary school teachers. An examination of the physical character of the Earth and its place in the solar system. Students cannot receive credit for both GEOG 104 and GEOG 105. Prerequisite: Intended for elementary education majors. Three hours lecture and one two-hour lab per week.

GEOG 105: INTRODUCTION TO PHYSICAL GEOGRAPHY (4 credit hours)

Introduction to the variable physical character of the earth. Treatment of weather, climate, soil, vegetation, landforms and oceanic circulation with emphasis on processes, interrelationships and distributional patterns. Students cannot receive credit for both GEOG 104 and GEOG 105. Three hours lecture, one two-hour laboratory per week.

GEOG 111: INTRODUCTION TO OCEANS AND COASTS (3 credit hours)

The study of coastlines, coastal landforms, and the tectonic and oceanographic forces that shape them. One mandatory Saturday half-day field trip to Assateague Island is required. Three hours per week.

GEOG 150: ENVIRONMENTAL SCIENCE: CONCEPTS AND METHODS (4 credit hours)

Explores global and regional environmental processes and systems, as well as the impact of humans on these systems. Addresses current environmental issues such as climate change, habitat loss and water pollution, emphasizing the role of science in identifying problems and finding solutions. May not receive credit for both BIOL 150 and GEOG 150. Three hours lecture, two hours laboratory per week.

GEOG 201: WEATHER AND CLIMATE (4 credit hours)

Examination of weather and climate with emphasis on processes and distributional patterns. Interrelationships between climatic controls stressed. Three hours lecture, two hours laboratory per week.

GEOL 103: INTRODUCTION TO PHYSICAL GEOLOGY (4 credit hours)

Introduction to the nature and character of the Earth's crust and the geological processes that generate and shape landform features. Topics include minerals, rocks, earth structure and plate tectonics, geological processes and associated landforms. Three hours lecture, two hours laboratory per week.

MATH 155: MODERN STATISTICS WITH COMPUTER ANALYSIS (3 credit hours)

Descriptive and inferential analysis of raw data, emphasizing appropriate assumptions, computer use and interpretation. Consideration of parametric and nonparametric methods and comparison of their powers. Intended for students in the social and natural sciences. May not receive credit for more than one: MATH 150, 155, 213 or 216. Prerequisites: High school Algebra II and plane geometry. Three hours per week.

MATH 198: CALCULUS I FOR BIOLOGY AND MEDICINE (4 credit hours)

Introduction to analytic geometry, limits, continuity, derivatives of elementary functions, applications of derivatives and antiderivatives in a biological context. May not receive credit for both MATH 198 and MATH 201. Prerequisite: C or better in MATH 140 or equivalent. Four hours per week.

MATH 201: CALCULUS I (4 credit hours)

Introduction to analytic geometry, limits, continuity, derivatives of elementary functions, applications of the derivatives. May not receive credit for both MATH 198 and MATH 201. Prerequisite: MATH 140 or equivalent. Four hours per week.

MATH 210: INTRODUCTION TO DISCRETE MATHEMATICS (4 credit hours)

Introduction to basic techniques and modes of reasoning for discrete problem solving. Set theory, recurrence relations, counting, graphs and lattices, number theory. Prerequisites: MATH 140 or equivalent. Four hours per week.

MATH 216: STATISTICAL THINKING (4 credit hours)

Descriptive and inferential analysis of data, emphasizing appropriate assumptions, computer use and interpretation. Parametric and non-parametric methods are compared and contrasted. Includes a weekly laboratory. Prerequisite or Corequisite: C or better or concurrent enrollment in MATH 160, 198, 201 or similar calculus experience. Four hours per week.

PHYS 108: INTRODUCTION TO ASTRONOMY (4 credit hours)

Survey of modern astronomy for non-science majors. Basic physics concepts utilized to study the night sky, light, optics and telescopes, planets, the moon and sun, stars nebulae, galaxies and the universe. Some night observations required. May not be taken for credit if student already has credit for PHYS 109. Three hours lecture, two hours laboratory per week.

PHYS 109: PRINCIPLES OF ASTRONOMY (3 credit hours)

Introductory course for non-science majors. Principles of astronomy are developed in a conceptual way. Topics covered include scale of the universe, a guide to the sky, cycles of the sun and moon, atoms and spectra, the sun and stars, structure and evolution of stars, the Milky Way and other galaxies, the solar system, and life on other worlds. May not be taken for credit if student already has credit for PHYS 108. Three hours lecture per week.

PHYS 121: GENERAL PHYSICS I (4 credit hours)

Introduction to Newtonian mechanics and applications. Topics include kinematics, dynamics, rotational motion, equilibrium, conservation laws and fluids. Not intended for physics or chemistry majors. Recommended Prerequisite: College algebra. Three hours lecture, two hours laboratory per week.

PHYS 221: PHYSICS I (4 credit hours)

Introduction to calculus-based Newtonian mechanics for students majoring in physics, engineering and chemistry. Prerequisite or Corequisite: MATH 201. Six hours lecture/activity per week.

Capstone Courses

BIOL 415: RESEARCH IN BIOLOGY (3 credit hours)

Independent student research under the supervision of a faculty member. May receive credit within the major for up to six credits combined of BIOL 415, 416, 417 and 420. Prerequisite: Permission of instructor. Schedule to be arranged individually. Forty-five contact hours per credit hour.

BIOL 420: READINGS IN BIOLOGY (1-3 credit hours)

Readings designed to permit in-depth study of selected topics. Students submit written reports of their findings at the end of the semester. Specific topics are indicated on students' transcripts. Prerequisites: Sixteen hours in biology, permission of instructor.

BIOL 450: INTERNSHIP IN BIOLOGY (1-3 credit hours)

Experiences in biology-related work provide students with an opportunity to use acquired biological knowledge in a professional way and to investigate potential career options. Under special circumstances this course may be taken a second time for credit, but only with permission of the internship coordinator. Prerequisites: Junior standing, biology major and approval of Internship Coordinator. 45 student contact hours per credit hour. Permission to register must be granted prior to the experience and registration must be concurrent with the experience. (P/F)

BIOL 490: ADVANCED SPECIAL TOPICS IN BIOLOGY (1-4 credit hours)

Study of a specific area of biological science. Topic varies semester to semester. May be taken twice for credit under different subtitles. Prerequisites: Permission of instructor or 12 credits of biology, junior standing. One to four hours per week.

CHEM 310: INTERMEDIATE CHEMISTRY RESEARCH (1-3 credit hours)

Intermediate level individual chemical research on an approved subject under supervision of a member of the faculty. Written report and seminar presentation required. May be taken twice for credit. Prerequisites/Corequisites: CHEM 221 and permission of department chair. Three hours per week per credit.

CHEM 403: PRINCIPLES OF CHEMICAL RESEARCH (3 credit hours)

Individual undergraduate research on approved subject under supervision of a member of the faculty. Students will be introduced to the chemical literature, writing styles, and presentation styles used in

chemistry. Prerequisite: Twenty-four hours of chemistry and permission of department chair. Nine hours per week.

CHEM 410: CHEMICAL RESEARCH (3 credit hours)

Individual undergraduate research on approved subject under supervision of a member of the staff. Written report, seminar presentation required. May be taken twice for credit. Prerequisites: CHEM 403 and permission of department chair. Nine hours per week, conference with the instructor.

CHEM 413: INTERNSHIP/CO-OP IN CHEMISTRY (3 credit hours)

Work experience designed to provide qualified students opportunities to use acquired chemical knowledge in a professional way. Written report, seminar presentation required. Prerequisites: Twenty-four hours of chemistry, consent of instructor. Six hours work per week, conference with supervisor.

COSC 380: INTERNSHIP (3 credit hours)

Students work under supervisors in a local firm or public institution in conjunction with an advisor from the department. Cross-listed with MATH 380. MATH/COSC 380 may be taken twice for a maximum of six credits but used only once toward a major in mathematics or computer science. Prerequisite: Approval of department chair. Eight to ten hours per week. (P/F)

COSC 385: DIRECTED STUDY (1-4 credit hours)

For students who desire to pursue a special topic in computer science not covered in the current curriculum. Under most circumstances' students will take this course for three credit hours. This course may be repeated under different subtitles for a total of nine credits, but only a total of four credit hours from MATH 385 and /or COSC 385 may be used toward a major or minor. Prerequisite: Consent of the instructor and Chair of the Department of Mathematics and Computer Science. One to four hours per week.

COSC 390: UNDERGRAD RESEARCH PROJECT (1-3 credit hours)

Offers study of some area of computer science in more depth than is possible in the usual classroom setting. Students work on projects under the direction of faculty members. Prerequisite: Department approval. (P/F)

DSCI 470: RESEARCH METHODS IN DATA SCIENCE (3 credit hours)

Preparation for professional research and problem solving in data science and DSCI 490 projects. This course includes discussion of methodologies that can be used within data science, to ensure that the data used in problem solving is relevant and properly manipulated to support data science projects. Students will gain an understanding of the philosophy of using experimentation to gain scientific knowledge and the important components of successful experimentation and presentation. Basic information literacy techniques including; searching for primary literature and information using library reference materials and on-line databases; writing reports and research papers; analyzing and presenting graphical data; the ethical use of information; and presenting research using presentation development software will be discussed. Prerequisite: C or better in COSC 311. Three hours per week.

DSCI 490: CAPSTONE PROJECT (3 credit hours)

Capstone project in one of the areas of data science chosen, designed, and carried out by the student with the advice and approval of a faculty member. Actual work may be carried out at off-campus sites. Written report, seminar presentation is required. Pre-requisites: DSCI 470 and permission of instructor who will direct study.

ENGR 395: INTERMEDIATE ENGINEERING RESEARCH (1-3 credit hours)

Intermediate level, individual research project in engineering with supervision of a member of the faculty. May be repeated for up to six credits. Prerequisites: Eight credits of physics and/or engineering and departmental approval. Two hours per week per credit.

ENGR 490: RESEARCH IN ENGINEERING (2 credit hours)

Research project in engineering chosen, designed and carried out by student with the advice and approval of a faculty member. Actual work may be carried out at off-campus sites. Written report, seminar presentation required. Prerequisites: PHYS 470, 40 credits of physics/engineering (or senior standing), department chair approval. Six hours per week.

GEOG 414: RESEARCH AND WRITING (3 credit hours)

Development of research methods in geography. Topics include formulation of problems, establishment of hypotheses, development of structures for testing hypotheses and practice with forms of geographic presentation. Maps, numerical and field methods are used. Cannot receive credit for both GEOG 300 and GEOG 414. Prerequisites: Twelve hours of geography, including completion of GEOG 204 or consent of instructor. Three hours per week.

GEOG 415: SELECTED PROBLEMS (1-3 credit hours)

Independent study permitting research or in-depth work on a selected topic to be indicated on student's transcript. May be taken twice for credit under different subtitles. Intended for seniors with 18 or more hours in geography and/or geology. Prerequisite: Permission of department chair. Three hours per week for each credit hour.

GEOG 460: INTERNSHIP (1-3 credit hours)

Provides students with opportunities to apply geographic/planning theory, techniques and knowledge as practicing professionals. Intended for seniors with 18 or more hours in geography. Cannot be used to satisfy requirements for the major. May be offered for undergraduate or graduate credit. Prerequisite: Approval of the department. Three hours per week for each credit hour. (P/F)

MATH 380: INTERNSHIP (3 credit hours)

Students work under supervisors in a local firm or public institution in conjunction with an advisor from the math department. Cross-listed with COSC 380. MATH/COSC 380 may be taken twice for a maximum of six credits but used only once toward a major in mathematics or computer science. Prerequisite: Approval of department chair. Eight-to-ten hours per week. (P/F)

MATH 385: DIRECTED STUDY (1-4 credit hours)

For students who desire to pursue a special topic in mathematics not covered in the current curriculum. Under most circumstances' students will take this course for three credit hours. This course may be repeated under different subtitles but only a total of four credit hours from MATH 385 and/or COSC 385 may be used toward a major or minor. Prerequisite: Permission of the instructor and chair of the Department of Mathematics and Computer Science. One to four hours per week.

MATH 390: UNDERGRADUATE RESEARCH PROJECT (1-3 credit hours)

Offers study of some area of the mathematical sciences in more depth than is possible in the usual classroom setting. Students work on a project under the direction of faculty members. Prerequisite: Approval of research committee and department chair. (P/F)

PHYS 450: INTERNSHIP/ CO-OP PHYSICS (3 credit hours)

Work experience in which qualified students use knowledge of physics in a professional setting. Students summarize experiences in written reports with seminar presentations. Prerequisites: Twenty hours of physics, permission of department chair. Six hours per week.

PHYS 470: SENIOR SEMINAR (1 credit hour)

Senior seminar for Physics majors. Introduction to research practices. Preparation for PHYS 475 or PHYS 490 projects. Prerequisites: 30 credits of physics and/or engineering, or department chair approval. One hour per week.

PHYS 490: RESEARCH IN PHYSICS (3 credit hours)

Research project in one of the areas of physics chosen, designed and carried out by student with the advice and approval of a faculty member. Actual work may be carried out at off-campus sites. Written report, seminar presentation required. Prerequisites: PHYS 470 and 40 credits of physics (or senior standing) and department chair approval.



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

TOPIC: Towson University: Master of Science in Athletic Training

COMMITTEE: Education Policy and Student Life

DATE OF COMMITTEE MEETING: Tuesday, May 5, 2020

SUMMARY: The University has offered a Bachelor of Science degree in Athletic Training (BSAT) since 1996. The Commission on Accreditation of Athletic Training Education accredits the program and successful completion leads to eligibility to sit for the certification examination that the Board of Certification for the Athletic Trainer administers. In May 2015, the Athletic Training Strategic Alliance mandated that the professional degree for athletic training programs must be a Master of Science by 2022.

The program will be anchored in the foundation and long-standing success of the TU BSAT. Specifically, the BSAT program has a strong reputation and is recognized for its success in educating athletic trainers to serve as members of Maryland's healthcare workforce (e.g., graduation rate; first-time student pass rate on the certification examination; employment of graduates). Graduates of the program have worked as athletic trainers in a variety of settings (i.e., secondary schools; colleges/universities; professional sports; physician offices; sports medicine centers; law enforcement and military settings; occupational and industrial settings) throughout the state of Maryland and across the United States. Graduates have also pursued advanced medical education following completion of the Athletic Training degree.

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 fees revenue.

CHANCELLOR'S RECOMMENDATION: That the Committee on Education Policy and Student Life recommend that the Board of Regents approve the proposal from Towson University to offer the Master of Science in Athletic Training.

COMMITTEE RECOMMENDATION:

DATE: May 5, 2020

BOARD ACTION:

DATE:

SUBMITTED BY: Joann A. Boughman

jboughman@usmd.edu



Office of
the President
8000 York Road
Towson, MD 21252-0001

April 9, 2020

Jay A Perman, PhD.
Chancellor
University System of Maryland
3300 Metzert Road
Adelphi, MD 20783

Dear Chancellor Perman,

Towson University requests approval for a new **Master of Science in Athletic Training**. The University has offered a Bachelor of Science degree in Athletic Training since 1996. The Commission on Accreditation of Athletic Training Education accredits the program and successful completion leads to eligibility to sit for the certification examination that the Board of Certification for the Athletic Trainer administers. In May 2015, the Athletic Training Strategic Alliance mandated that the professional degree for athletic training programs must be a Master of Science by 2022; that directive prompts this proposal.

Please find attached the program proposal. Please contact Dr. Westley Forsythe if you have any questions or require additional information (410-704-3312, wforsythe@towson.edu).

Thank you in advance for your review.

Sincerely,

A handwritten signature in black ink that reads 'Kim Schatzel'.

Kim Schatzel, Ph.D.

President

KS/wrf

cc: Dr. Antoinette Coleman, Associate Vice Chancellor for Academic Affairs, USM

☎ 410.704.2356 ☎ 410.704.3488
presidentoffice@towson.edu

<https://www.towson.edu/about/administration/president/>



Dr. Karen Eskow, Interim Dean of Graduate Studies

Dr. Westley Forsythe, Director, Accreditation and Compliance Services

Dr. Maggie S. Reitz, Vice Provost for Academic Affairs

Dr. Tab Uhrich, Associate Dean, College of Health Professions

UNIVERSITY SYSTEM OF MARYLAND INSTITUTION PROPOSAL FOR

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

Towson University
Institution Submitting Proposal

M.S. Athletic Training
Title of Proposed Program

Master of Science
Award to be Offered

Fall 2020
Projected Implementation Date

0835-05
Proposed HEGIS Code

51.0913
Proposed CIP Code

Kinesiology
Department in which program will be located

Jaime DeLuca
Department Contact

410.704.2748
Contact Phone Number

jdeluca@towson.edu
Contact E-Mail Address



Signature of President or Designee

04/09/2020
Date

Executive Summary

The Department of Kinesiology in the College of Health Professions (CHP) at Towson University (TU) has offered a Bachelor of Science degree in Athletic Training (BSAT) since 1996. Successful completion of the Athletic Training Program, which is accredited by the Commission on Accreditation of Athletic Training Education (CAATE), leads to eligibility to sit for the certification examination administered by the Board of Certification for the Athletic Trainer (BOC-AT) and to enter the workforce in the profession of athletic training. In May 2015, the Athletic Training Strategic Alliance mandated that the professional degree for athletic training programs must be a Master of Science by 2022. In response to that directive and to continue educating athletic trainers to meet Maryland's healthcare, wellness and fitness needs, TU proposes to offer the Master of Science in Athletic Training (MSAT).

The TU MSAT will be anchored in the foundation and long-standing success of the TU BSAT. Specifically, the TU BSAT program has a strong reputation and is recognized for its success in educating ATs to serve as members of Maryland's healthcare workforce (e.g., graduation rate; first-time student pass rate on the certification examination; employment of graduates).

Graduates of the program have worked as athletic trainers in a variety of settings (i.e., secondary schools; colleges/universities; professional sports; physician offices; sports medicine centers; law enforcement and military settings; occupational and industrial settings) throughout the state of Maryland and across the United States. Graduates have also pursued advanced medical education following completion of the AT degree.

The MSAT curriculum will address emerging healthcare system complexities with focused attention on population health. TU has developed a robust graduate curriculum that has been approved institutionally and is in alignment with the CAATE standards. A two-year, full-time graduate program will be offered to meet the educational and workforce needs for athletic trainers. TU has the resources, experience, and expertise to offer the MSAT program providing graduate-level academic rigor and clinical excellence, while responding to healthcare workforce needs, opportunities, and accreditation changes.

A. CENTRALITY TO INSTITUTIONAL MISSION STATEMENT AND PLANNING PRIORITIES

Description of the Program

Athletic trainers (ATs) are highly qualified, multi-skilled health care professionals who render service or treatment under the direction of, or in collaboration with, a physician. As a part of the health care team, services provided by ATs include primary care, injury and illness prevention, wellness promotion and education, emergent care, examination and clinical diagnosis, therapeutic intervention and rehabilitation of injuries and medical conditions. The education required to meet growing and more complex healthcare needs has advanced to a graduate professional degree. Specifically, in May 2015, the Athletic Training Strategic Alliance, a group of four leading organizations (i.e., National Athletic Trainers Association (NATA); Board of Certification for the Athletic Trainer (BOC-AT); Commission on Accreditation of Athletic

Training Education (CAATE); National Athletic Trainers Association Research and Education Foundation) mandated that the professional degree for athletic training programs must be a Master of Science by 2022.¹ In response to that directive and to continue to offer athletic training education opportunities, the current bachelor's degree in athletic training (BSAT) will transition to a master's degree for entry into practice as a certified athletic trainer.

The Master of Science in Athletic Training (MSAT) program will use a competency-based approach in both the classroom and clinical settings. The program will use a medical-based education model that includes acquisition of knowledge, skills and clinical abilities combined with a broad scope of foundational behaviors of professional practice. In creating the courses for the MSAT, a key component was to ensure the use of current evidence-based best practices in athletic training education and pedagogical strategies for instruction of athletic training knowledge and skills.

The Department of Kinesiology (Kinesiology) will house the MSAT program. The MSAT curriculum is a two-year, full-time graduate program developed to fully align with CAATE standards. Specifically, the MSAT is comprised of 60 credits which include 30 credits of theory and didactic coursework, 12 credits of on-campus laboratory coursework, and 18 credits of clinical coursework. During the final semester, a 9-credit immersive clinical experience

will focus on comprehensive patient-centered care. The following chart offers the proposed MSAT Program of Study:

MSAT Program of Study

Year #1		
Summer	Fall	Spring
KNES 560: Fundamental Concepts and Competencies in Athletic Training (<i>3 credits; 45 lab hours</i>) KNES 565: Health Informatics and Quality Improvement (<i>3 credits</i>)	KNES 615: Acute & Traumatic Injury: Assessment and Management (<i>3 credits; 45 lab hours</i>) KNES 625: Evidence-Based Assessment of the Lower Extremity (<i>3 credits; 45 lab hours</i>)	KNES 626: Evidence-Based Assessment of the Upper Extremity (<i>3 credits; 45 lab hours</i>) KNES 623: Rehabilitative Care: Therapeutic Exercise (<i>3 credits; 45 lab hours</i>)
	KNES 622: Acute and Rehabilitative Care: Therapeutic Modalities (<i>3 credits; 45 lab hours</i>) KNES 602: Practicum I: Clinical Application of Athletic Training Competencies (<i>3 credits – 150 clinical fieldwork hours</i>)	KNES 681: Epidemiology and Research Methods in Athletic Training (<i>3 credits</i>) KNES 604: Practicum II: Clinical Care of the Lower Extremity (<i>3 credits – 150 clinical fieldwork hours</i>)

Year #2		
Summer	Fall	Spring
KNES 650: Human Performance Optimization <i>(3 credits; 45 lab hours)</i> KNES 606: Practicum III: Clinical Care of the Upper Extremity <i>(3 credits – 150 clinical fieldwork hours)</i>	KNES 627: Evidence-Based Assessment of the Head and Spine <i>(3 credits; 45 lab hours)</i> KNES 701: Maximizing Rehabilitation Interventions <i>(3 credits; 45 lab hours)</i> KNES 702: Pathophysiology of Medical Conditions <i>(6 credits; 90 lab hours; 45 clinical fieldwork hours)</i>	KNES 668: Advanced Diagnostic Imaging and Pharmacology <i>(3 credits)</i> KNES 703: Practicum IV - Comprehensive Patient-Centered Care <i>(9 credits – 450 clinical fieldwork hours)</i>

The MSAT is a competency-based curriculum that allows students to begin their education at a foundational, basic skills level. As students progress through the six-semester year-round program, each semester builds on knowledge and skills learned in previous courses. Successful completion of each course and each semester indicates growing levels of demonstrated knowledge and competency in the athletic training skills needed to provide safe and effective healthcare across multiple populations in professional, amateur, and recreational settings. Graduates of TU's BSAT program have worked as athletic trainers in a variety of settings (i.e., secondary schools; colleges/universities; professional sports; physician offices; sports medicine centers; law enforcement and military settings; occupational and industrial settings) throughout the state of Maryland and the United States. Further, the BSAT program has been successful in retaining and graduating 88% of the students who were admitted (3-year aggregate rate).² In addition, the student pass rate on the certification examination administered by the BOC-AT is 98% compared to a national average of 80.8%,^{2,3} and the current employment rate of program graduates as athletic trainers is 77%.² Ultimately the MSAT builds on this strong foundation, reputation, and success of athletic training education at TU and includes clinical education experiences as well as didactic learning opportunities, and supports student success, institutional need, and workforce demand.

Proposed Program Supports the Institution's Goals

In preparing the MSAT program, ensuring consistency with the vision, mission, and strategic planning of TU has been a priority. *TU 2020: A Focused Vision for Towson University* defines eight priorities. The MSAT is strongly aligned with these priorities, in particular the following areas will be supported by this program:

- **Academic Excellence and Student Success**

Academic excellence is generally considered the ability to perform, achieve, or excel in scholastic activities. While promoting academic excellence is a goal of the MSAT program, an equally important goal of the program is ensuring student success. Student success is not simply measured by grades earned or grade point average (GPA), rather it reflects the individual growth of the “whole” student, including, intellectual, emotional, social, and ethical development. The MSAT program affords students opportunities to achieve success by providing experiences that extend beyond the classroom. Students in the MSAT program will have a range of activities from which to choose depending on their personal needs and/or interests, including active participation in professional associations (i.e., state, regional, and national levels), active involvement with student groups (e.g., Athletic Training Majors Club; Graduate Student Association), engagement in research projects that result in oral presentations and/or published articles, participation in seminars on a variety of topics, and engagement in outreach activities. The current athletic training faculty have an established record of excellence in scholarship, teaching, and service. The accomplishments of the faculty ensure a commitment to excellence in the educational, clinical, and professional experiences that will be provided through the MSAT program.

- **Internships and Experiential Learning Opportunities**

Clinical experience is an essential component of an athletic training program. Providing internship and clinical experience opportunities expands the educational learning opportunities for students as well as enhances our community outreach programs. The MSAT program will provide clinical education in sites currently being used in the BSAT program. These sites include colleges/universities, high schools,

sports medicine centers, hospitals, and the TU campus (Health Center, Athletics, Campus Recreation). With the advanced graduate program, the MSAT program will develop additional community and healthcare partnerships to support required clinical education and internship experiences. New partners will help provide a greater diversity of experiential opportunities for athletic training students.

- A Model for Leadership Development

A recurring theme evidenced in the curricular design of the MSAT program promotes developing outstanding professional and lifelong leadership. Exposing students in the MSAT program to leadership development will be accomplished through several means, including coursework, clinical experiences, and professional opportunities that may include student organizations, community engagement and volunteer outreach to vulnerable populations. The *Practice Analysis, 7th edition* (previously, the *Role Delineation Study/ Practice Analysis*) published by the BOC-AT identifies leadership as an important role for the AT in performing responsibilities for managing human resources to provide efficient and effective health care and educational services.⁴ The curriculum has been developed to support leadership as an expected competency.

- A Model of Outstanding Stewardship

As a major educator of health professions in the region, the MSAT program will support building and strengthening the healthcare workforce throughout Maryland. The MSAT program advances the rigor and education of ATs to manage complex care and address injury prevention and rehabilitation needs of those across the lifespan. ATs, by virtue of their emphasis on sport and fitness, will lead to a healthier community and address lifelong well-being.

In keeping with the *TU 2020: A Focused Vision for Towson University*, the *University System of Maryland Strategic Plan*, and the *Maryland State Plan for Higher Education*, the following TU student learning outcomes are promoted in the MSAT program:

- Information Literacy and Technology Competency

Competency in the use of healthcare informatics is essential to the ability of the AT to perform numerous and varied tasks. These tasks can range from searching, retrieving, and utilizing information derived from online databases and/or internal databases for clinical decision support to properly protecting the security of personal health information in a manner that is consistent with legal and ethical considerations for use of such data. The MSAT program will prepare students to efficiently, effectively, and appropriately use information technology as allied health care practitioners.

- Effective Communication

Effective and efficient communication is crucial in healthcare. Accordingly, written and oral communication is an area that is addressed in coursework, clinical experiences, and CHP interprofessional education opportunities throughout the MSAT program. The goal is for students to demonstrate the ability to communicate effectively with patients, family, and health care personnel appropriate to their level of understanding.

- Specialized Knowledge in Defined Fields

Athletic training is recognized by the American Medical Association (AMA), Health Resources Services Administration (HRSA) and the Department of Health and Human Services (HHS) as an allied health care profession. The practice domains for athletic training are injury/illness prevention and wellness, clinical evaluation and diagnosis, immediate and emergency care, treatment and rehabilitation, and organizational and professional health and well-being. The purpose of the MSAT program is to prepare students as entry-level ATs through an extensive curriculum of didactic and clinical experiences in alignment with national CAATE standards. Successful completion of the program will allow the student to sit for the certification examination administered

by the BOC-AT and begin a career in one of the many employment settings available to ATs.

- Working in Multifaceted Work Environments

ATs are highly qualified, multi-skilled health care professionals who provide care for a wide range of patients across diverse settings. ATs are employed in schools, colleges and universities, professional and Olympic sports, youth leagues, municipal and independently owned youth sports facilities, physician practices, rural and urban hospitals, urgent and ambulatory care centers, clinics with specialties in sports medicine, cardiac rehabilitation, medical fitness, wellness and physical therapy, police and fire departments and academies, the military, and the performing arts. MSAT students will be exposed to these multifaceted environments throughout their education.

Proposed Program: Adequate Funding for First Five Years

Funding for the MSAT program will be provided by a combination of reallocated funds from the current BSAT program and graduate tuition dollars from the MSAT program revenue. The majority of resources will be reallocated.

- Physical Resources/ Facilities

The MSAT program will be located in Burdick Hall on the TU campus, the current location of the BSAT program. No renovation of current labs or facilities is needed. The current facilities contain sufficient program space and state-of-the-art equipment used for daily instruction of athletic training students enabling acquisition and mastery athletic training knowledge and skills. Regular classrooms, computer labs, and athletic training faculty offices are also available in Burdick Hall. In addition, graduate students in the MSAT program will have access to additional faculty research laboratories that include a gait analysis lab, biomechanics lab and the TU Wellness Center at the Institute for WellBeing.

- Equipment

Kinesiology is fully equipped to meet the teaching, learning and practices needs of the MSAT students. Operational funds for equipment for the BSAT program will be transferred directly into the MSAT budget. Athletic training students will also share equipment in Kinesiology as needed. The CHP and the Department of Nursing maintain high tech simulation equipment and facilities that can be accessed by MSAT faculty and students.

- Student Support Services

TU offers a wealth of student support services as well as a dedicated focus on resources for graduate students. The Division of Student Affairs at TU is designed to provide comprehensive resources to support students' academic achievement. These include, but are not limited to, services through the Career Center, Counseling Center, Accessibility and Disability Services, Health Center, Office of Student Conduct and Civility Education, and Veterans Center. In addition, the Office of Graduate Studies provides paid graduate assistantships, resources for professional development with conference attendance at major meetings, and leadership opportunities with dedicated mentors.

- Faculty, Staff, and Administrative personnel

All faculty and staff supporting the current BSAT program will be reallocated to the MSAT program. With the development of this advanced professional graduate level degree and the increasing rigor and implementation of evidence-based practice and quality health outcome metrics, one full-time faculty and one dedicated staff program specialist will be required to meet the teaching, research and accreditation needs of the MSAT program. The full-time faculty member will assist in delivery of coursework and the program specialist will manage the extensive administration work including clinical affiliation agreements, detailed documentation needs and clinical scheduling and coordination.

B. CRITICAL AND COMPELLING REGIONAL NEED AS IDENTIFIED IN THE STATE PLAN

Demand and need for the program in terms of meeting present and future needs of the region and the State.

In 2018, there were 385 CAATE-accredited athletic training programs in the United States.¹ It was estimated that there would be a reduction of approximately half of the athletic programs in the country subsequent to the CAATE mandate that programs transition from a Bachelor of Science to a Master of Science degree.¹ Some institutions would either not choose to or be unable to transition successfully to a Master's level program. As a result, an increase in demand for student capacity in MSAT accredited programs is projected.

TU is one of three CAATE-accredited athletic training programs in the state of Maryland. Each of the programs is in a different geographical region of the State and has existed for more than 20 years. Salisbury University and Frostburg State University have successfully transitioned from a Bachelor of Science Degree to a Master of Science Degree.

The demand to attend TU has been high for many years. Given the documented successes of the BSAT (e.g., retention rate; graduation rate; first time pass rate BOC-AT certification examination; graduate school acceptance; employment rate) coupled with the anticipated decrease in the availability of Master's level programs, an increase in applicants for the MSAT program at TU is expected.

Evidence that perceived need is consistent with Maryland State Plan for Postsecondary Education.

The MSAT addresses several aspects of the 2017-2021 *Maryland State Plan for Postsecondary Education* including, but not limited to, the following:

- Strategy 4. Continue to ensure equal educational opportunities for all Marylanders by supporting all postsecondary institutions.

Consistent with TU policy and practices, the MSAT program will ensure commitment to equal education opportunities, regardless of race, disability, ethnicity, gender, or sexual identity. The MSAT at TU will be the only athletic training program available in the Central Maryland region. As such, it provides a large population of Maryland

residents with access to a specialized program of study with significant health workforce needs.

- Strategy 5. Ensure that statutes, regulations, policies, and practices that support students and encourage their success are designed to serve the respective needs of both traditional and non-traditional students.

The MSAT, which will require the completion of 60 graduate credits, is structured so that students have the option to complete the program in two years or extend completion over a period of four years. To accommodate traditional and non-traditional graduate students, an abundance of opportunities for career exploration and goal-setting are available to students in the program. In addition, the program of study is based on the requirements for accreditation as a Professional Program in Athletic Training as defined by the CAATE. Professional programs lead to eligibility to sit for the BOC-AT examination and to enter the workforce as a certified AT.

- Strategy 7. Enhance career advising and planning services and integrate them explicitly into academic advising and planning.

As a goal of the MSAT program is to prepare students for employment as an AT, the integration of academic and career advising will be an integral component of the program. Advising will encompass the following:

- provide students with a clear understanding of program requirements and a plan for completion of the requirements;
 - work with students to determine their individual needs, interests, and career trajectories; and
 - ensure student access and use of familiarity with the resources available through the NATA Career Center and the TU Career Center.
- Strategy 8. Develop new partnerships between colleges and businesses to support workforce development and improve workforce readiness.

The MSAT will utilize partnerships with public and private high schools, other colleges/universities, sports medicine centers, and hospitals in Baltimore and surrounding areas which have been established by the BSAT. These institutions/organizations (n=25) serve as clinical education sites. The clinical preceptors at these sites are directly involved in the education and evaluation of the

athletic training students. The MSAT program will continue to use the existing clinical sites as well as actively recruit additional sites and preceptors to support advanced rigor and diversity of learning experiences. In doing so, there are increased opportunities for students to experience, understand, and apply competencies needed in real-world workplaces. As current and new sites are used for MSAT student education, industry partners will have opportunities to recruit new graduates for their practices. Furthermore, partnerships also afford TU the opportunity to bridge the gap between the institution and local employers in supporting and improving workplace development and readiness.

- Strategy 9. Strengthen and sustain development and collaboration in addressing teaching and learning challenges.

One of the greatest teaching and learning challenges for clinical healthcare education is the ability to secure strong clinical placements. In shifting to graduate level education, preceptors will likely need additional education about the advanced rigor and curricular changes required to support graduate athletic training education. The BSAT faculty offer annual preceptor workshops to insure clinical education meets program goals and supports student success. These workshops and on-site evaluations by the MSAT Clinical Coordinator will insure graduate level education standards are achieved.

C. QUANTIFIABLE AND RELIABLE EVIDENCE AND DOCUMENTATION OF MARKET SUPPLY AND DEMAND IN THE REGION AND STATE

Work Settings

According to the United States Department of Labor/Bureau of Labor Statistics (BLS) as of April 2019, ATs are employed in a variety of settings. The largest employers of ATs are provided in Table 1.5 ATs also work with military law enforcement, professional sports teams and performing arts programs.

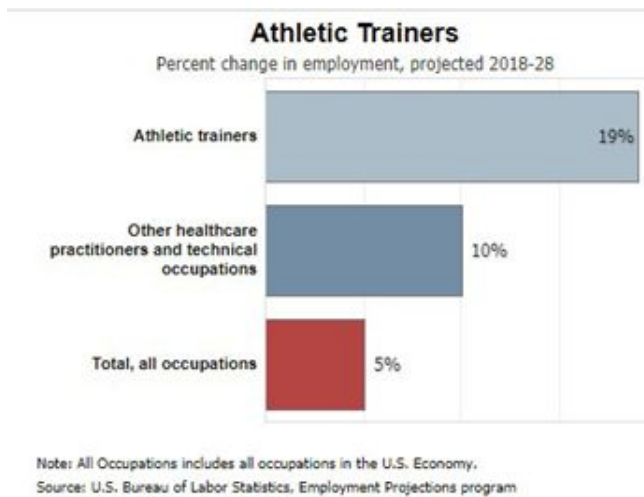
Educational services; state, local, and private	37%
Hospitals; state, local, and private	17%
Offices of physical, occupational and speech therapists, and audiologist	16%
Fitness and recreational sports centers	7%
Self-employed workers	6%

Employment Opportunities

According to the BLS, there were 31,100 jobs in athletic training in 2018.⁵ Employment of ATs is projected to grow by 5,900, or 19 %, from 2018 to 2028. This rate is much faster than the average for all occupations (Figure 1).⁵

Figure 1. Projected Change in Employment of Athletic Trainers

(Retrieved from <https://www.bls.gov/ooh/healthcare/athletic-trainers.htm#tab-6>)



Increased demand is attributed to several factors, including:

- The general public becoming aware of the effects of sport-related injuries
- The continued growth of sport programs at all ages and experience levels contributing to an increased incidence of injuries

- Larger numbers of physically active middle-aged and older populations that will likely result in an increased incidence of musculoskeletal injuries
- A rise in the number of states requiring public secondary schools to employ ATs as part of their athletic programs; ATs are typically on-site and the first responders when injuries occur; given the expertise and skill-set of ATs, on-site availability has numerous advantages
- Increasingly sophisticated treatments used by ATs in injury prevention, assessment, and rehabilitation
- Employers in settings other than athletic programs (e.g., industrial setting; military bases) hiring ATs as a means for reducing injuries, on-site assessment, treatment, and rehabilitation of injuries.

Projected Employment in Maryland

The projected employment for ATs in many central Maryland counties is expected to increase by an average of 12%.⁶ Projected employment for ATs in nearby counties in Maryland is outlined in Table 2.

Area/County	2019 Jobs	2023 Jobs	2019-2023 Change	Percent Change
Baltimore City	70	80	10	+14%
Montgomery	52	57	5	+10%
Baltimore	45	50	5	+11%
Anne Arundel	26	29	3	+12%
Prince George's	20	23	3	+15%
Howard	19	22	3	+16%
Frederick	13	15	2	+15%
All counties	318	356	38	+12%

D. REASONABLENESS OF PROGRAM DUPLICATION

TU has one of three CAATE-accredited athletic training programs in the state of Maryland. Each of the programs is in a different geographical region in the state and has provided athletic training student education for more than 20 years, demonstrating a need for all three programs. As student interest in athletic training education exceeds the number of seats available in Maryland’s programs, academic program duplication has not been an issue. With Maryland’s continuing need for healthcare providers to meet the growing needs of Maryland citizens, further program expansion may be indicated. Given the three institutions have successfully offered academic majors in athletic training at the undergraduate level and the increased need for Master’s programs in athletic training, the development of a Master’s level program in athletic training, by any or all of the three schools, should not have a negative impact on the sustainability of the these programs.

Table 3 outlines enrollment numbers for state and regional competitive “Master of Science in Athletic Training” programs. As per the CAATE, programs are required to report three years of enrollment data.⁷

Institution	Location	Enrollment Data per Year		
		2017	2018	2019
Bridgewater College	Bridgewater, VA	N/A ₁	N/A ₁	6
East Stroudsburg University	East Stroudsburg, PA	7	8	6
Gannon University	Erie, PA	8	6	10
Marshall University	Huntington, WV	9	8	TBD ₂

Moravian College	Bethlehem, PA	7	13	11
Salisbury University	Salisbury, MD	10	15	14
Shenandoah University	Winchester, VA	13	15	TBD ₂
West Chester University	West Chester, PA	N/A ₁	12	TBD ₂

Table 3 Notes:

1Program had not yet begun admitting students at the Master of Science level.

2Program has not yet posted 2019 enrollment data.

Justification for proposed program

Several factors provide justification for the proposed MSAT program at TU including:

- First and foremost, the academic credential to enter practice as an AT has been mandated to change from the baccalaureate degree to the master's degree precipitating closure of TU's BSAT program by 2022.
- TU has a long history of success educating ATs. Successes include retention and graduation rate, first time student pass rate on the certification examination administered by the BOCAT, and the employment rate of program graduates.
- The TU MSAT program supports the University's mission and reflects the *TU 2020: A Focused Vision for Towson University*.
- The TU MSAT program is consistent with the *University System of Maryland Strategic Plan* and the *Maryland State Plan for Higher Education*.
- The TU MSAT program is the only program proposed for the central Maryland region and one of only three athletic training programs in the state.

In addition, given the market demand for ATs is projected to grow by 19% from 2018 to 2028 and the loss of baccalaureate athletic training programs, there is a need to ensure the development of athletic training programs and the master's level. The demand for ATs as first

line healthcare providers is increasing; therefore, TU expects continued high interest in athletic training education resulting in a high demand program. As sustainability at the baccalaureate level has not been problematic with three programs statewide, no interference with the sustainability of master's level programs throughout Maryland is expected.

E. RELEVANCE TO HIGH-DEMAND PROGRAMS AT HISTORICALLY BLACK INSTITUTIONS (HBIs)

At present, no athletic training programs are currently housed in HBIs in Maryland, thus the MSAT program at TU is not expected to have a direct impact on high-demand programs at HBIs.

Baccalaureate graduates from HBIs, however, are eligible to apply for MSAT admission. Athletic training provides a strong and dynamic education and career pathway for baccalaureate graduates in health science majors for HBIs across the state.

F. RELEVANCE TO THE IDENTITY OF HISTORICALLY BLACK INSTITUTIONS (HBIs)

With no athletic training programs at Maryland HBIs, there is no relevance to the identity of HBIs anticipated from the proposed MSAT program.

G. ADEQUACY OF CURRICULUM DESIGN, PROGRAM MODALITY, AND RELATED LEARNING OUTCOMES

Establishment of proposed program and faculty who will oversee the program

The TU MSAT will be anchored in the foundation and long-standing success of the TU BSAT. With the increasing complexities of technology, advances in healthcare and greater needs for population based health care, a shift from the undergraduate level to a professional graduate degree was mandated by the CAATE. Based on these dynamic and shifting practice and industry changes, the MSAT curriculum will address emerging healthcare system complexities

with additional rigor and attention to population health. TU has developed a robust graduate curriculum that has been approved institutionally and is in alignment with the CAATE standards.

Athletic training programs must be accredited by the CAATE for graduates to be eligible for certification and practice as an AT. The mission of the CAATE is defining, assessing, and continually improving AT education. The *Standards for Accreditation of Professional Athletic Training Programs (Standards)*, published by the CAATE, are used for the development, evaluation, analysis, and maintenance of athletic training programs.⁷ The MSAT program at TU is designed to ensure compliance with the *Standards* to obtain and maintain recognition as a CAATE-accredited professional athletic training program while addressing complex, population based care.

The MSAT program, which requires the completion of 60 credits, will be delivered using traditional face-to-face, on-campus didactic and laboratory coursework with clinical fieldwork placements at many off-campus locations. Face-to-face experiences will enable the formal acquisition, practice, and evaluation of knowledge and clinical proficiencies through classroom, laboratory, and clinical experiences. Didactic and clinical education will take place concurrently through introduction of knowledge and skills in a logical progression with increasing levels of student responsibility as they progress through the curriculum. By completion of the final semester, students shift to an entry-level collaborative-autonomous practice. In addition, a variety of additional learning opportunities will be available to students, including research projects, interprofessional engagement among students in other health profession programs, and service activities,. The program has been designed to reflect best-practices in athletic training education.

The faculty who will oversee the MSAT program include the Chairperson of the Department of Kinesiology, the MSAT Program Director (PD) and the Clinical Education Coordinator (CEC). As required by the CAATE, the PD serves as the lead athletic training faculty, is a full-time faculty member, and is responsible for management and administration of the program.⁷ Responsibilities include program planning and operation; program evaluation; reporting and documentation of accreditation compliance; input into budget management, appointment of program personnel and the evaluation of athletic training faculty and staff.

Also critical to the support and education of athletic training students is the CEC, another fulltime role required by the CAATE.⁷ This faculty member is responsible for oversight of the clinical education portion of the program. Oversight responsibilities of the CEC include student assignments to athletic training clinical experiences and supplemental clinical experiences; clinical site evaluation; student evaluation; and preceptor identification, selection, evaluation, professional development and regular and on-going communications. In addition to these formal faculty appointments within the athletic training program, additional faculty prepared and certified as ATs support the course, learning, and advising needs of the athletic training students.

Educational objectives and learning outcomes appropriate to the rigor, breadth, and modality of the program.

Student learning outcomes align with core competencies associated with the *Standards* and are as follows:

Patient Centered Care: Demonstrate clinical competence in the areas of injury assessment, diagnosis, immediate management, and rehabilitation, including knowledge, psychomotor skills, and clinical reasoning to effectively treat patients.

Evidence-Based Practice: Implement evidence-based practice to connect didactic content with clinical decision making in the delivery of patient care to maximize patient outcomes.

Professionalism: Demonstrate involvement in service and professional associations; advocate for the profession of athletic training at the local, state and national levels; and practice athletic training in a manner that is congruent with ethical standards.

Health Care Informatics: Integrate principles and practices of health care informatics to the administration and delivery of patient care, including data to drive informed decisions; document, communicate, and manage health-related information; mitigate error; and support decision making.

Interprofessional Practice: Promote the role of athletic trainers as members of a broader health care community and the importance of working collaboratively with other health care providers in optimizing patient care.

Quality Improvement: Interpret patient outcomes measures to assess patient status, progress, and changes over time leading to quality care and improvements.

Student achievement learning outcomes and assessment of student achievement learning outcomes in the program

TU's academic assessment initiative requires each program to provide an assessment plan that includes student learning outcomes; minimum two assessment measures per student learning outcome where at least one is a direct measure; minimal level of expectation per measure; and data collection cycle. The initiative requires programs assess student learning outcome annually as documented in an annual report submitted to TU's Office of Assessment. These annual reports are peer-reviewed every January at TU's Assessment Day for Programs event. Measures intended to provide evidence of the aforementioned student learning outcomes for the MSAT program include course-based clinical simulation exams, clinical-based performance evaluations, and case study assignments. Additional information pertaining to learning outcomes and assessment is available in Section M of this document.

Courses that comprise the curriculum and program requirements

The courses that comprise the MSAT program have been approved by the various curriculum committees at TU (i.e., Kinesiology Curriculum Committee; CHP Curriculum Committee; University Curriculum Committee) and are as follows:

- **KNES 560: Fundamental Concepts and Competencies in Athletic Training** (3 credits)
Knowledge, skills, and professional foundations of athletic training and the role of the athletic trainer as a multi-skilled health care professional. The primary content areas include health care organization and administration; the pre-participation physical examination; the clinical evaluation process; protective taping and wrapping; and protective equipment.

- KNES 565: Health Informatics and Quality Improvement (3 credits)

Organizational, administrative, and management theories pertaining to the delivery of health care by the athletic trainer. The primary content areas include: program management; information management; financial management; development and maintenance of sport medicine facilities; health insurance systems/reimbursement for services; risk management and legal considerations; and administrative issues in educational and clinical settings.

- KNES 602: Practicum I: Clinical Application of Athletic Training Competencies (3 credits)

Clinical experience designed to provide students with authentic, real-time opportunities to practice and integrate athletic training knowledge, skills, and clinical abilities. Completed under the supervision of a preceptor, the clinical proficiency focus is on basic, fundamental athletic training skills and organization and administration related skills.

- KNES 604: Practicum II: Clinical Care of the Lower Extremity (3 credits)

Clinical experience designed to provide students with authentic, real-time opportunities to practice and integrate athletic training knowledge, skills, and clinical abilities. Completed under the supervision of a preceptor, the clinical proficiency focus is emergency care, evaluation of lower extremity injuries/conditions, and use of therapeutic modalities in injury management and rehabilitation.

- KNES 606: Practicum III: Clinical Care of the Upper Extremity (3 credits)

Clinical experience designed to provide students with authentic, real-time opportunities to practice and integrate athletic training knowledge, skills, and clinical abilities. Completed under the supervision of a preceptor, the clinical proficiency focus is the evaluation of upper extremity injuries/conditions and the use therapeutic exercise in rehabilitation.

- KNES 615: Acute and Traumatic Injury: Assessment and Management (3 credits)

Knowledge and clinical skills essential for evaluation and management of physically active individuals with acute life-threatening or emergent conditions. The primary

content includes the assessment, diagnosis, and immediate management of patients with potentially life-threatening or emergent conditions as well as specific acute life-threatening or emergent conditions commonly seen with physically active individuals.

- KNES 622: Acute and Rehabilitative Care: Therapeutic Modalities (3 credits)

Evidence-based and outcome-based types of modalities applied in the treatment and rehabilitation of disease and injury to physically active individuals, including the basic theory and principles of thermal, acoustic, electrical, light, and mechanical modalities and expected physiological responses during and following intervention.

- KNES 623: Rehabilitative Care: Therapeutic Exercise (3 credits)

Evidence-based and outcome-based types of exercise applied in the treatment and rehabilitation of disease and injury to physically active individuals, including the basic principles of range of motion, strength, proprioception, performance-specific, and functional exercises.

- KNES 625: Evidence-Based Assessment of the Lower Extremity (3 credits)

Knowledge, clinical examination skills, and application of the principles of examination, diagnosis, and management of lower extremity musculoskeletal injuries/conditions sustained by physically active individuals. The primary content areas include clinical anatomy, clinical examination, on-site examination, and on-site management of injury to the lower extremities and the etiology and pathophysiology of common lower extremity injuries sustained by physically active individuals.

- KNES 626: Evidence-Based Assessment of the Upper Extremity (3 credits)

Knowledge, clinical examination skills, and application of the principles of examination, diagnosis, and management of upper extremity musculoskeletal injuries/conditions sustained by physically active individuals. The primary content areas include clinical anatomy, clinical examination, on-site examination, and on-site management of injury to the upper extremities and the etiology and pathophysiology of common upper extremity injuries.

- KNES 627: Evidence-Based Assessment of the Head and Spine (3 credits)

Knowledge, clinical examination skills, and application of the principles of examination, diagnosis, and management of injuries/conditions to the axial region sustained by physically active individuals. The primary content areas include clinical anatomy, clinical examination, on-site examination, and on-site management of injuries/ conditions involving the axial region and the etiology and pathophysiology of common injuries/conditions involving the axial region.

- KNES 650: Human Performance Optimization (3 credits)

Comprehensive, systematic, and integrated training approaches to enhancing performance and reducing injury susceptibility of physically active individuals. The primary content areas include components of integrated performance training, design and application of sport performance training programs, and injury prevention strategies for the major joints and regions of the body.

- KNES 668: Advanced Diagnostic Imaging and Pharmacology (3 credits)

The principles of diagnostic imaging and testing and their role in the diagnostic process is one component of this course. The primary topics in this area include principles and types of diagnostic imaging, the use of diagnostic imaging in determining pathologies, interpretation and analysis of diagnostic imaging, and clinical decision making. A second component of the course is the use of therapeutic medications in the treatment and rehabilitation of injuries/conditions sustained by physically active individuals. The primary topics in this area include basic principles of pharmacotherapies and application of clinical decision-making skills regarding pharmacodynamics and pharmacokinetics. • KNES 681: Epidemiology and Research Methods in Athletic Training (3 credits) Concepts of epidemiology and research methodology as applied to the discipline of athletic training, including the knowledge and skills required to critically analyze and use evidence in athletic training and related fields to examine injury pathology, prevention, assessment, diagnosis, immediate management, and therapeutic intervention. The primary content areas include epidemiological measures, healthcare informatics, quantitative and qualitative research, diagnostic accuracy,

critical appraisal, clinical prediction, disablement models, and patient-oriented outcomes assessment.

- KNES 701: Maximizing Rehabilitation Interventions (3 credits)

Theoretical principles, development, and implementation of a comprehensive rehabilitation program for injuries/conditions sustained by physically active individuals. Knowledge, clinical skills, and application of the principles of rehabilitation designed to enhance function by identifying, remediating, and preventing impairments and activity restrictions to maximize participation specific to the major joints and regions of the body will be addressed.

- KNES 702: Pathophysiology of Medical Conditions (6 credits)

Current, evidence-based assessment and treatment for medical conditions and diseases that affect the physically active population. The clinical experience component of the course includes directed observation and supervised instruction by physicians and other healthcare professionals in performing examinations and developing and implementing treatment plans. The primary content areas include specific conditions and diseases of the body/body systems (e.g., cardiovascular; gastrointestinal; neurological; ear, nose, and throat; infectious diseases; systemic disorders) and relevant anatomy and physiology, signs and symptoms, referral and diagnostic tests, treatment and return to participation, prognoses, and prevention.

- KNES 703: Practicum IV - Comprehensive Patient-Centered Care (9 credits)

Immersive clinical experience designed to provide students with authentic, real-time opportunities to analyze, synthesize, integrate, and apply athletic training knowledge, skills, and clinical abilities. During this full-time experience, under the supervision of a preceptor, students will engage in the full scope of athletic training clinical practice (e.g., injury prevention; assessment and diagnosis; emergency and acute care; rehabilitation; reconditioning; return to sport/activity) as part of a sports medicine team.

General education requirements.

As the MSAT program is graduate level, no general education courses are required or embedded within the program.

Specialized accreditation or graduation certification requirements for the program and its students.

TU will seek full accreditation from the CAATE. In order for MSAT graduates to be eligible for examination by BOC-AT, CAATE accreditation is required. With TU's long history of CAATE accreditation at the undergraduate level, graduate program accreditation should not pose an issue. In addition to program accreditation, all students are also required to hold and maintain CPR/AED certification.

Assurance and any appropriate evidence that the proposed program will provide students with clear, complete, and timely information on 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 payments.

The students in the MSAT program will have access to the online *TU Athletic Training Program Student Resource Manual*. The manual provides detailed information pertaining to all aspects of the MSAT program. The information provided addresses topics specific to the following:

- Academic policies and procedures as established by TU, CHP, the Office of Graduate Studies, and Kinesiology (e.g., academic suspension or dismissal; disability accommodations; policies on academic dishonesty; registration procedures; graduation deadlines; professional behavior; petition and appeals process).
- TU MSAT program (e.g., program curriculum; academic policies and standards; grading policies; student advising; required certifications, training; clinical education; criminal background checks; professional behavior).

Students are required to acknowledge in writing, having read and accepting the information provided in the manual.

College and department information specific to the MSAT program will be provided on the program and university website. Athletic training program outcome data are published on the program website. University website information includes, but is not limited to, the following: resources for students; career support; degree/ program requirements; academic advising; career advising. A wealth of student resources and information is available at <https://www.towson.edu/studentlife/services/>. An online resource guide also addresses unique graduate student life; see <https://www.towson.edu/academics/graduate/gsa/documents/gsresource-guide.pdf>. In addition, information pertaining to graduate studies and programs is available online through the Office of Graduate Studies website and the *Graduate Catalog* for TU. The information includes, but is not limited to, the following: financial information (e.g., tuition and fees; financial aid; financial resources); student support services (e.g., disability support services; career center); and academic policies and procedures. The University has an active Graduate Student Association with student support resources; see <https://www.towson.edu/academics/graduate/gsa/>.

Students in the MSAT program will be assigned a dedicated AT faculty advisor. The advisor will be able to assist students in a variety of areas, including the development of a plan for completion of degree requirements and monitoring progress toward completion, familiarizing the student with the various academic and administrative resources available, and answering questions pertaining to the information in the *Graduate Catalog* and the *TU Athletic Training Program Student Resource Manual*.

Assurance and any appropriate evidence that advertising, recruiting, and admissions materials will clearly present the proposed program and the services available. As an accredited program, all program materials, print and online, are reviewed annually for accuracy by the program director. The advertising, recruiting, and admissions materials provided to prospective students will accurately and clearly present the MSAT. Regardless of the type of presentation (e.g., website; brochures; face-to-face meetings) or the content, transparency will be maintained to insure students have the most current program and student support services available to them.

It should also be noted that the CAATE website identifies the schools that have earned accreditation as a Master of Science degree in Athletic Training. Individuals are able to use the website to check availability of programs in any state in the United States. While prospective students may not be familiar with the CAATE, it is likely that they are familiar with the NATA.

The NATA website provides links that direct individuals to the CAATE's website and other sites for information pertaining to a master's degree in athletic training.

H. ADEQUACY OF ARTICULATION

The proposed MSAT at TU does not include or require articulations with other institutions.

I. ADEQUACY OF FACULTY RESOURCES

Brief narrative demonstrating the quality of program faculty. Include a summary of faculty with appointment type, terminal degree title and field, academic title/rank, status, and course(s) each faculty member will teach in the proposed program.

All athletic training faculty are full-time members in Kinesiology. They hold specialty certification and have experience as an AT. In addition to their teaching and service, tenure track faculty pursue disciplinary research to support understanding of injury prevention, mechanisms of injury and rehabilitation needs following injury. Table 4 provides a summary of the expert athletic training faculty who will teach in the MSAT program.

Table 4. Athletic Training Faculty				
Current Faculty	FTE/ AT % effort	Highest Degree/ Field of Study	Rank	Planned Course Assignments & AT Expertise Areas
Lisa Custer	1.0/ 100%	PhD/ Sports Medicine	Assoc. Prof.	KNES 623: Rehabilitative Care: Therapeutic Exercise KNES 606: Practicum III: Clinical Care of the Upper Extremity KNES 627: Evidence-Based Assessment of the Head and Spine KNES 701: Maximizing Rehabilitation Interventions
Emily Hildebrand	1.0/ 100%	PhD/ Teaching & Administration	Clinical Asst. Prof.	KNES 560: Fundamental Concepts and Competencies in Athletic Training KNES 565: Health Informatics and Quality Improvement KNES 625: Evidence-Based Assessment of the Lower Extremity KNES 622: Acute and Rehabilitative Care: Therapeutic Modalities KNES 604: Practicum II: Clinical Care of the Lower Extremity
Peter Lisman*	1.0/ 20%	PhD/ Exercise Physiology	Assoc. Prof.	KNES 650: Human Performance Optimization KNES 681: Epidemiology and Research Methods in Athletic Training

Mary Nadelen	1.0/ 100%	MA/ Exercise & Sport Science	Clinical Assoc. Prof.	KNES 615: Acute and Traumatic Injury: Assessment and Management KNES 626: Evidence-Based Assessment of the Upper Extremity KNES 702: Pathophysiology of Medical Conditions KNES 703: Practicum IV - Comprehensive Patient-Centered Care
Ashley Santo*	1.0/ 20%	PhD/ Human Movement Science	Assist. Prof.	KNES 560: Fundamental Concepts and Competencies in Athletic Training KNES 565: Health Informatics and Quality Improvement KNES 627: Evidence-Based Assessment of the Head and Spine
TBD	1.0/ 100%	PhD/ Athletic Training related field	Assist. Prof.	KNES 602: Practicum I: Clinical Application of Athletic Training Competencies KNES 681: Epidemiology and Research Methods in Athletic Training KNES 650: Human Performance Optimization KNES 668: Advanced Diagnostic Imaging and Pharmacology

* Exercise science faculty who also provide support to the AT program.

Demonstrate how the institution will provide ongoing pedagogy training for faculty in evidence-based best practices.

Towson University provides the faculty with an abundance of resources related to evidence based best practices in teaching. These resources, available for faculty across all ranks and titles, are available through the Office of the Provost, CHP, and Kinesiology. The *Faculty Academic Center of Excellence at Towson*, a department under the Office of the Provost, serves as a catalyst and model for using effective learning approaches that have the potential for transforming the quality of the academic experience for faculty and students. Dissemination of information is available through in-person and online delivery methods in the form of special events, workshops, and seminars. The numerous and varied presentation topics provide insight and practical suggestions on effective teaching and learning at the university level. CHP provides professional development support for faculty through conference travel as well as faculty development offerings throughout the academic year. Faculty self-select attendance at professional, university and college workshops. At the department level, Kinesiology provides a mentorship program for faculty specific to teaching. In particular, the one-to-one interaction (i.e., faculty mentor to instructor) is particularly advantageous as it allows for addressing the specific interests, needs, or goals of the instructor. Annual peer reviews of teaching support faculty excellence in the classroom.

J. ADEQUACY OF LIBRARY RESOURCES

The library resources available will be adequate for meeting the needs of MSAT students as these resources are already available for current athletic training faculty and students. Cook Library on the campus of TU houses an extensive collection of athletic training-related materials, including print and electronic books, on-line government documents, and a compilation of scholarly journals (print and electronic). Specific subject headings relevant to athletic training include sports medicine, sports emergencies, exercise training and prescription, physical education, recreation and sports, strength and conditioning, physical therapy, and rehabilitation sciences. Many electronic journals are also indexed through indexing/abstracting databases for athletic training and multidisciplinary topics. Table 5 provides a summary list of the athletic training holdings in the Cook Library as of 2019.

Table 5. Cook Library – Athletic Training Holdings as of 2019	
Print books	1500 titles
Electronic books and on-line government documents	3,775 titles
Print and electronic scholarly journals	More than 1000 titles

Faculty and students can access all of the databases, catalogs, e-book content, and electronic journals from any location on campus through TU's secure wireless network as well as remotely through the Cook Library web page. Comprehensive lists of databases, electronic reference books, and journals in all formats are available through the Cook Library web page. Table 6 provides the available indexing/abstracting databases for AT and related disciplines.

Table 6. Indexing/Abstracting Databases	
Health/Biomedical Databases	Multidisciplinary Databases
PubMed: Medline (with library link resolver)	PsycINFO
Medline (on the Ebsco search platform)	ScienceDirect
SPORTDiscus with Full Text	Scopus
CINAHL Plus with Full Text	Ebook Central (ProQuest)
Health Source-Nursing/Academic Edition	Ebsco eBook Collection
Merck Manuals	Dissertations & Theses Global (ProQuest)
R2 Digital Library	

In addition to Cook Library, faculty and students have access to materials through reciprocal agreements at nearby Baltimore institutions as well across the University System of Maryland and Affiliated Institutions (e.g. University of Maryland, College Park; University of Maryland, Baltimore County). Members of the TU academic community have borrowing privileges at these institutions. Further, Cook Library provides access to athletic training resources in libraries across the country. These materials can be requested for loan through standard interlibrary loan (ILL) services. As part of this service, faculty and students have access to RAPID ILL, a service customary at high research activity institutions. The current turnaround time for article requests is typically within 48 hours.

K. ADEQUACY OF PHYSICAL FACILITIES, INFRASTRUCTURE, AND INSTRUCTIONAL EQUIPMENT

The MSAT program will be located predominantly in Burdick Hall, which houses Kinesiology. All faculty offices, classrooms and skill laboratories for the athletic training program are located in Burdick Hall. The Kinesiology wing has over 21,000 square feet dedicated to state-of-the-art classrooms, a student computer lab, a computer classroom, practical instructional facilities, faculty research space, faculty and staff offices, a student lounge, and an athletic training simulation laboratory.

The Kinesiology Main Office Suite is more than 5300 square feet dedicated to faculty and administrative space. It includes over 35 faculty offices, including offices for the Department Chair (n=1) and Program Coordinators (n=4), two conference rooms, space for three full-time administrative assistants, a kitchen/common room, and two rooms for administrative supplies and equipment. Supply rooms have ample cabinets and storage units for faculty/staff office and general classroom needs, and faculty/staff mailboxes. Additionally, there is a photocopy machine, fax machine, and color printer for faculty/staff use.

Kinesiology utilizes 10 didactic and/or clinical lab classrooms, including an 84-seat capacity lecture hall. Classrooms are equipped by TU's Office of Technology Services (OTS) with state-of-the-art instructor workstations. Classrooms also have ceiling-mounted LCD display projectors and motorized projection screens, document cameras and complete A/V equipment.

Additionally, classrooms have multi-paneled Whiteboards. Any classroom may be used by the MSAT program for teaching purposes.

Burdick Hall includes several specialized rooms. These include:

- Burdick Hall Room 110 – Student Computer Lab

The room is an open computer lab accessible to students Monday through Friday from 9 am to 5 pm. It is available to faculty at all hours of the day. The room contains 30 Dell desktop computers that OTS maintains and replaces on a regular schedule.

- Burdick Hall Room 112 - Computer Classroom

The classroom is used primarily for course-based teaching. It is equipped with an instructor workstation provided by OTS as well as 27 Dell desktop computers and work stations for

student learning. Instructors may use this classroom for teaching an entire semester course or may reserve the room for particular dates/individual class sessions.

- Burdick Hall Room 117 – Athletic Training Simulation Lab

The Athletic Training Simulation Lab, approximately 1200 square feet, is designed and equipped specifically for athletic training needs. The room is equipped with a state-of-the-art instructor workstation, a ceiling-mounted LCD display projector and motorized projection screen and two 65” flat screen televisions (one mounted on each side of the classroom).

Other unique areas include storage space and a handwashing station.

Equipment/ supplies available in the lab for athletic training instructional purposes includes the following:

- First aid and general health care: stethoscopes, reflex hammers, bracing and splinting supplies, ambulatory aids, standard protective equipment (e.g. helmets, shoulder pads), elastic wraps, models and equipment for assessing body temperature including rectal thermometers, glucometer.
- Emergency care: spine board, AEDs, CPR manikins, equipment to administer oxygen therapy, metered dose inhaler, auto injectable epinephrine, cervical stabilization devices, oropharyngeal airways, drills, and nasal lubricant.
- Therapeutic modalities: short wave diathermy, combination electrotherapy units, paraffin bath, portable transcutaneous electrical neuromuscular stimulation units, hi-lo traction table, and laser therapy units.
- Assessment: goniometers, inclinometers, tape measures, penlights, scissors, and shears/sharps.
- Therapeutic exercise: elastic bands and straps, medicine balls, weights, balance pads and devices, foam rolls, finger webs, and physio balls.

The following expendable supplies available for instructional purposes in the lab include:

- First aid, emergency care, and general health: examination gloves, gauze, various kinds of athletic tape, urinalysis strips, cotton-tipped applicators, thermometer covers, alcohol pads, and Steri-strips.
- Miscellaneous cleaning supplies.

Kinesiology also has access to facilities in the Towson Center (TC) on the TU campus. The TC is a space that is occupied by both Kinesiology and the Department of Athletics. The space maintained by Kinesiology includes one traditional 40-seat classroom, two faculty research labs, one fitness center learning space, a multi-purpose classroom (for activities such as dance, yoga, self-defense, as well as didactic instruction), and a strength and conditioning lab/classroom space. The TC houses one of the three athletic training rooms on campus which is maintained by Athletics. The other two rooms are located in the Fieldhouse and Burdick Hall. The MSAT program is able to use any of the athletic training rooms for instruction of specific lessons (e.g., the hydrotherapy room is used in the therapeutic modalities course for the unit on the cryotherapy).

The MSAT will utilize existing physical facilities and instructional equipment currently being utilized by the BSAT program. It should be noted that during the 2017 CAATE accreditation visit, it was determined that the instructional environment (e.g., classroom space, instructional equipment, and additional resources) was well maintained and appropriately equipped. The program believes that the existing physical facilities, infrastructure, and instructional equipment are fully sufficient to operate the MSAT program.

L. ADEQUACY OF FINANCIAL RESOURCES WITH DOCUMENTATION (AS OUTLINED IN COMAR 13B.02.03.14)

Program resources for the MSAT program will come from a combination of reallocated funds and MSAT program tuition and fee revenue. All faculty salaries from the BSAT program will be used to support the MSAT program. The current BSAT program has select course-related fees for lab supplies and disposable medical supplies; the MSAT program will assign a similar course fee structure.

TABLE 7: RESOURCES

Resources Categories	(Year 1)	(Year 2)	(Year 3)	(Year 4)	(Year 5)
1. Reallocated Funds₁	438,063	454,386	471,361	489,016	507,376
2. Tuition/Fee Revenue_{2, 3}	243,824	730,740	1,056,040	1,229,620	1,258,420
a. Annual Full-time Revenue of New Students					
Number of Full-time Students					
In-State	8	19	26	30	30
Out of State	2	6	9	10	10
Annual Tuition Rate					
In-State	\$611	\$629	\$648	\$667	\$687
Out of State	\$1,099	\$1,132	\$1,166	\$1,200	\$1,236
Subtotal Tuition	\$183,252	\$562,290	\$820,260	\$960,300	\$989,100
Annual Fees					
University Fees	\$60,072	\$167,700	\$234,780	\$268,320	\$268,320
AT Course Fees	\$500	\$750	\$1,000	\$1,000	\$1,000
Subtotal Fees	\$60,572	\$168,450	\$235,780	\$269,320	\$269,320
Total Full-time Revenue of New Students	\$243,824	\$730,740	\$1,056,040	\$1,229,620	\$1,258,420
b. Annual Part-time Revenue					
Number of Part-Time Students	0	0	0	0	0
Credit Hour Tuition Rate	0	0	0	0	0
Annual Fees Per Credit Hour	0	0	0	0	0
Annual Credit Hours Per Student	0	0	0	0	0
Subtotal Tuition	\$0	\$0	\$0	\$0	\$0
Subtotal Fees	\$0	\$0	\$0	\$0	\$0
Total Part Time Revenue	\$0	\$0	\$0	\$0	\$0

3. Grants, Contracts & Other Sources ₃	\$0	\$0	\$0	\$0	\$0
4. Other Sources	\$0	\$0	\$0	\$0	\$0
TOTAL (Add 1 - 4)	\$681,887	\$1,185,126	\$1,527,401	\$1,718,636	\$1,765,796

Table 7 Notes:

1Reallocated funds include 3 FT BSAT faculty FTEs (salary with fringe) and operational funds from the current BSAT program.

2Student cohorts are calculated at 75% in-state and 25% out-of-state.

3Tuition increases by 3% annually.

Complete Table 8 Program Expenditures and Narrative Rationale. Provide finance data for the first five years of program implementation. Provide narrative rationale for each expenditure category

Table 8 details anticipated program expenditures. Faculty FTE is listed as four and thus requires an additional FTE to support the MSAT program.

TABLE 8: EXPENDITURES					
Expenditure Categories	(Year 1)	(Year 2)	(Year 3)	(Year 4)	(Year 5)
1. Total Faculty Expenses	\$461,191	\$479,638	\$498,824	\$518,777	\$539,528
(b + c below)					
a. #FTE	4.4	4.4	4.4	4.4	4.4
b. Total Salary₁	346,760	360,630	375,056	390,058	405,660
c. Total Benefits	114,431	119,008	123,768	128,719	133,868
2. Total Administrative Staff Expenses	66,240	68,890	71,645	74,511	77,491
(b + c below)					

a. #FTE	1.0	1.0	1.0	1.0	1.0
b. Total Salary¹	48,000	49,920	51,917	53,993	56,153
c. Total Benefits	18,240	18,970	19,728	20,518	21,338
3. Total Support Staff Expenses	24,200	25,168	26,174	27,221	28,310
(b + c below)					
a. #FTE graduate assistant)	1.0	1.0	1.0	1.0	1.0
b. Total Salary¹	17,536	18,237	18,967	19,726	20,515
c. Total Benefits	6,664	6,930	7,207	7,496	7,796
4. Equipment	5,000	2,000	5,000	2,000	5,000
5. Library	500	500	500	500	500
6. New or Renovated Space	0	0	0	0	0
7. Other Expenses (equipment calibration, preceptor training & professional development, ATrack, etc.)	26,000	26,000	26,000	26,000	26,000
a. CAATE accreditation costs	8,000	11,000	5,000	5,000	5,000
TOTAL (1-7)	\$591,130	\$613,196	\$633,144	\$654,009	\$681,830

Table 8 Notes:

¹All salaries increase by 4% per year.

Four full-time faculty FTEs will support the MSAT. In addition, two exercise science faculty from Kinesiology will also provide teaching, research and program support. All faculty hold certification as athletic trainers and have practice experience. One administrative staff FTE will provide program specialist needs to address the intensity of detailed documentation associated with student clinical tracking using the ATrack electronic management system, electronic CAATE documentation, clinical fieldwork affiliation agreements, preceptor tracking and professional development programming for preceptors.

Equipment needs in the MSAT program are modest and select equipment is shared with the Exercise Science program in Kinesiology. Equipment is replaced over time due to use, deterioration over time and equipment lifespan; equipment needs include spine boards, otophthalmoscopes, airway manikins, inclinometers, etc.

Resources for annual software license of ATrack for clinical student tracking, large equipment calibration, preceptor training and professional development and accreditation are also needed. The CAATE annual fees are \$5,000. With the substantive change from the BS to MS, an additional fee of \$3,000 and a site visit fee of \$6,000 are anticipated and noted in years 1 and 2 of the program.

M. ADEQUACY OF PROVISIONS FOR EVALUATION OF PROGRAM (AS OUTLINED IN COMAR 13B.02.03.15)

Procedures for evaluating courses, faculty, and student learning outcomes

- Course Evaluation

Initial course evaluation occurs subsequent to the development of a course. The AT faculty developed the courses that comprise the MSAT program. As part of the development process, courses were reviewed by athletic training faculty to ensure the following:

- Course content reflected the subject matter dictated by the *Standards*
- Appropriateness of course difficulty and workload
- Effective assessment and grading practices in the course syllabus consistent with the guidelines established by TU.
- It should be noted that the guidelines reflect best practices in course development.

Following the development and review of courses by athletic training faculty, per TU protocol, courses are reviewed by the KNES Curriculum Committee, the CHP Curriculum Committee, and the Graduate Studies Committee. While the primary focus at the department level is to ensure course content accuracy, the focus at the college and graduate level is to facilitate the production of quality course proposals. In

addition, college and graduate level review includes addressing any resource issues and determining if conflicts exist between departments/colleges.

Ongoing evaluation of courses takes place primarily in two ways, namely review by athletic training faculty and student evaluation. The athletic training faculty reviews courses taught on an annual basis to determine strengths and concerns related to a course as well as to make sure that the content identified in the course syllabus is being covered. If a review indicates concerns or problems with a course, athletic training faculty work to develop strategies for addressing/rectifying problems. Student evaluation of courses takes place at the end of every semester. Using a tool developed by TU faculty that allows for quantitative and qualitative feedback, students have the opportunity to primarily assess instructor performance (e.g., ability to communicate clearly; quality of student-instructor interaction; preparedness). Students are not involved in evaluating the adequacy, relevance, and timeliness of course content. However, students can comment on the “things liked about a course,” suggested “improvements” for a course, and recommending the course to others.

- Faculty Evaluation

Evaluation of faculty takes place using policies and procedures established by TU promotion, tenure/reappointment and merit committees and associated documents. As part of those procedures, faculty evaluation takes place at the department, college, and university level. The main areas of evaluation include teaching, scholarship, and service. Tools used as part of the annual evaluation process include review of the individual’s portfolio that includes, but is not limited to, the following:

- Evidence of scholarship (e.g., articles in scholarly journals; presentations at scholarly meetings) and service work
- A synopsis of teaching related-activities (e.g., courses taught; new instructional procedures; interdisciplinary, diversity, international, and new technology projects)
- Review of course syllabi
- Peer teaching observation reports
- Quantitative and qualitative student evaluation of instruction

- Clinical Preceptor Evaluation

Given the significant role that preceptors play in the clinical education experiences of the student, preceptors will be evaluated on an annual basis. Formal and informal evaluations will take place through meetings with the CEC and/or the PD. In addition, similar to faculty evaluation, students will have the opportunity to submit evaluations (i.e., quantitative and qualitative) of a preceptor's performance.

- Courses – Student Learning Outcomes

Each of the courses in the MSAT program include learning outcomes that identify the unique knowledge and skills expected to be gained from a given course. The learning outcomes are clear, observable, and measurable. Because the learning outcomes reflect the six categories in Blooms' taxonomy, they range in complexity from lower skill levels (e.g., recall; define) to higher skill levels (e.g., evaluate; synthesize; analyze). Assessment measures exist for each learning outcome in a course. On an annual basis, specific learning outcomes are identified for assessment purposes. The PD will oversee the processes involved in the assessment of student learning outcomes, including collection and analysis of data, and creation of action plans, as necessary.

Institution evaluation of the proposed program's educational effectiveness, including assessment of student learning outcomes, student retention, student and faculty satisfaction, and cost-effectiveness.

Evaluation of the MSAT program will include two components, namely completion of the CAATE Annual Report and completion of the directives for assessment as established by TU's Office of Assessment in the Division of Academic Affairs:

- CAATE Annual Report

The assessment process will be completed by the athletic training faculty under the supervision of the PD. The process will entail creating a comprehensive assessment plan that evaluates all aspects of the MSAT program to ensure compliance with the requirements established by CAATE. The comprehensive plan will include 4 major areas:

- Development of the plan: The plan will be developed so that it is ongoing and documents regular assessment of the educational program. The plan will address assessment that includes: clinical site evaluations, preceptor evaluations, completed clinical proficiency evaluations, academic course performance, and retention and graduation rates.
- Assessment Measures: The plan will include assessment measures as required by the CAATE, including aggregate data for the most recent three test cycle years for the following metrics: number of students graduating from the program who took the BOC-AT examination, number and percentage of students who passed the BOC-AT examination on the first attempt, and overall number and percentage of students who passed the examination regardless of the number of attempts. The plan will also include measures that relate to the program's stated educational mission, goals and objectives associated with the quality of instruction, student learning, and overall program effectiveness.
- Data collection and analysis: Data from the assessment measures will be collected. It will then be analyzed to determine the extent to which the MSAT program is meeting its stated mission, goals, and objectives.
- Action Plan: Based on a review and discussion of the data analysis, an action plan to ensure continual program improvement will be generated. The action plan will include:
 - Targeted goals and actions if the program and/or student learning outcomes are not met
 - Timelines for reaching goals
 - The specific faculty member(s) responsible for action steps
 - Evidence of periodic updating steps taken as they are met, or circumstances change

The Annual Report submitted to the CAATE for the BSAT has been approved each year for the past 5 years. Further, the most recent comprehensive accreditation review in 2017/2018 awarded the program a 10-year accreditation period (the maximum possible). It is expected that the MSAT program will continue to demonstrate compliance with assessment as defined by the CAATE.

- TU Program Assessment

Consistent with TU policy, the MSAT program will participate in the university-wide internal assessment process conducted through the TU Office of Assessment. The PD will oversee athletic training faculty in completion of program assessment based on policies and procedures identified by the TU Office of Assessment. As part of the assessment process, student learning outcomes are identified, monitored, and reviewed annually. As warranted, athletic training faculty will develop improvement strategies based on analyses of data. It should be noted that assessment of the BSAT program per TU guidelines has received best practice recognition for the last five years. It is expected that the MSAT program will continue to demonstrate compliance with assessment as defined by the TU Office of Assessment.

N. CONSISTENCY WITH THE STATE'S MINORITY STUDENT ACHIEVEMENT GOALS (AS OUTLINED IN COMAR 13B.02.03.05)

TU is committed to playing its role in securing the state's minority student achievement goals. The Center of Student Diversity (CSD) was established to aid the institution in its efforts to foster inclusion, collaboration, and relationship building. The CSD provides academic, social, and transition support for underserved students and promotes exchange and dialogue among individuals of diverse backgrounds and lifestyles. The CSD, housed in the Division of Student Affairs, supports the academic success of historically under-represented groups through programs and services that enhance the student experience.

Additional evidence of TU's commitment to minority student's achievement goals are as follows:

- TU's Career Center recognizes the importance of racial and ethnic diversity and is committed to providing resources for the social and professional development of our minority students.
- Dr. Schatzel, President of TU, has publicly and prominently articulated the importance of diversity to TU's role, purpose, and mission, including recently in an open editorial in the Baltimore Sun.⁸

- TU received a \$1m grant from the Howard Higher Medical Institute to cultivate minority student achievement in STEM. Towson is one of twenty-four universities, from more than 500 applicants, selected by the Howard Hughes Medical Institute, which is committed to diversity and inclusion.⁹

TU's strategic plan *TU 2020: A Focused Vision for Towson University* has committed the university to "further strengthen its commitment to diversity and continue to provide a safe, inclusive, welcoming and peaceful community respectful to all. Towson will continue as a recognized national model for diversity and closing the achievement gap. Our institutional strategies will expand and continue to provide a forum for campus dialogue and action."¹⁰ Dr. Schatzel's *Presidential Priorities* are implementing this objective, most notably via the establishment of the Office of Inclusion and Institutional Equity.¹¹

O. Relationship to Low Productivity Programs Identified by the Commission The

MSAT program is not identified as a low productivity program.

P. Adequacy of Distance Education Programs

The MSAT program is not a distance education program.

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11. Towson University, Diverse and Inclusive Campus. Retrieved from <https://www.towson.edu/about/administration/president/priorities/campus.html>. Accessed September 15, 2019



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

TOPIC: University of Baltimore Bachelor of Science in Cyber Forensics

COMMITTEE: Education Policy and Student Life

DATE OF COMMITTEE MEETING: Tuesday, May 5, 2020

SUMMARY: The proposed Bachelor of Science in Cyber Forensics is a 14-course, 42-credit major designed to provide students with a broad-based practical understanding of cybercrimes and cyber investigations. The core of the program exposes students to forensic investigation techniques and skills, computer and digital information crimes, fraudulent activities in the use of technology and digital systems, prevention and security management strategies, and legal interventions and resolutions.

Combating cyber threats/attacks effectively requires that we educate investigators and administrators in a multidisciplinary manner, combining several branches of learning into a common forensic studies program: criminal justice, cyber investigations, cybersecurity, incident response management, computer technology, and law and business regulations. A degree in cyber forensics provides the knowledge and skills needed to interpret electronic data to solve crimes; it combines investigative skills with digital technology in the examination and preservation of evidence. Civil and/or criminal investigations within businesses and public agencies require the same legal understanding and forensic evidence skills and techniques used in traditional criminal investigations. For this reason, forensics will play a critical role as an organizing concept for this program because the systematic collection and presentation of evidence is critical in a court of law.

The program was developed in collaboration with Maryland community colleges to align with associate degree offerings and to take that education to the next level of expertise. This would be the **first cyber forensics bachelor's degree in Maryland**. It also leverages the strengths of the MS in Forensic Science-Cyber Investigations.

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 fees revenue.

CHANCELLOR'S RECOMMENDATION: That the Committee on Education Policy and Student Life recommend that the Board of Regents approve the proposal from University of Baltimore to offer the Bachelor of Science in Cyber Forensics.

COMMITTEE RECOMMENDATION:

DATE: May 5, 2020

BOARD ACTION:

DATE:

SUBMITTED BY: Joann A. Boughman

301-445-1992

jboughman@usmd.edu



March 30, 2020
Jay A. Perman, M.D.
Chancellor
University System of Maryland
3300 Metzert Road
Adelphi, Maryland 20783

Dear Dr. Perman,

The University of Baltimore is proposing a new Bachelor of Science in Cyber Forensics (proposed CIP 43.0403 and proposed program code 2105-10). This is a 42-credit program that provides an undergraduate degree in an area of study that is already available at the graduate level at UB through the Master of Science in Forensic Science – Cyber Investigations.

This proposed program addresses an area of high need within metropolitan Baltimore, the State of Maryland, and the region. The program was developed in collaboration with community college partners and other units at UB, so students could begin the program at UB or easily transfer in from a Maryland community college and continue this educational pathway.

UB is grateful to the University System of Maryland and to the Governor’s Workforce Development Program, which helped support the development of this program.

If you have any questions, please contact the Office of the Provost at 410.837.5243. Thank you for your review.
Sincerely,

Darlene Brannigan Smith, Ph.D.
Executive Vice President and Provost

Encl.

Office of the Executive
Vice President and Provost

**UNIVERSITY OF
BALTIMORE**

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UNIVERSITY SYSTEM OF MARYLAND INSTITUTION PROPOSAL FOR

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

University of Baltimore

Institution Submitting Proposal

B.S Cyber Forensics

Title of Proposed Program

B. S. Cyber Forensics

FALL 2020

Award to be Offered

Projected Implementation Date

2105-10

43.0403

Proposed HEGIS Code

Proposed CIP Code

School of Criminal Justice
College of Public Affairs

Debra L. Stanley, Ph.D.

Department in which program will be located

Department Contact

(410) 837-5243

ccaraco@ubalt.edu

Contact Phone Number

Contact E-Mail Address

Signature of President or Designee

Date

New Instructional Program – University of Baltimore Bachelor of Science in Cyber Forensics

A. Centrality to Institutional Mission and Planning Priorities

The mission of the University of Baltimore (UB) is to offer career-focused education for aspiring and current professionals, providing the region with highly educated leaders who make distinctive contributions to the broader community. The University's vision is to be the premier regional university for career advancement, where leaders grow, thrive and learn to apply their skills for solving local and global challenges. One of the greatest challenges in our region and globally is the rapidly evolving character and reach of cybercrime.

UB's School of Criminal Justice already offers a highly regarded bachelor's degree in **Forensic Studies**, with options in police science and in forensic sciences, and a growing **Master of Science program in Forensic Science – Cyber Investigations**, which is offered both at the downtown campus and at the Universities at Shady Grove. This graduate program has attracted both professionals working in the field and those who wish to move into cyber forensics. The proposed Bachelor of Science in Cyber Forensics would both leverage the strengths of existing offerings and align with Maryland community college offerings in cyber forensics. The program fills a significant gap in cyber forensics undergraduate education in Maryland. Having been developed in collaboration with community college cybercrime, cybersecurity and cyber forensic technology programs, the B.S. in Cyber Forensics would provide the next level of education for A.A. and A.S. graduates to complete a baccalaureate degree. The proposed program is fully consistent with the UB mission and will help provide the region with needed leaders in the growing field of cyber forensics.

The first B.S. Cyber Forensics degree program beyond an associate degree in Maryland

The proposed BS in Cyber Forensics is a 42-credit major designed to provide students with a broad-based practical understanding of cybercrimes and cyber investigations. The core of the program exposes students to forensic investigation techniques and skills, computer and digital information crimes, fraudulent activities in the use of technology and digital systems, prevention and security management strategies, and legal interventions and resolutions.

It is expected that coursework in the B.S. Cyber Forensics program will enhance students' digital and technology fluency as many courses involve accessing information that is available online. In addition, students will, in some classes, learn to access online data and use software tools designed to sort and make sense of data. It is expected that such fluencies will make graduates more competitive and more marketable for professional opportunities post-graduation.

Program Requirements:

Total number of credits: 42 semester credit hours. The program requires the successful completion of 14 three-credit core courses:

Code	Course Title	Credits	Faculty
FSCS 301	Fundamentals of Cyber Forensics	3	de la Cruz/Xu/Zahadat
FSCS 310	Cyber Crime and the Law	3	Hall/Rosenblatt
FSCS 320	Operating System Forensics	3	de la Cruz/Xu/Zahadat
FSCS 325	Mobile Forensics	3	de la Cruz/Zahadat
FSCS 360	Network Forensics	3	Xu/Zahadat
FSCS 375	Scripting for Cyber Forensics	3	Zahadat/Xu/Leggette
FSCS 380	Fundamentals of Cryptography	3	Xu/Leggette
FSCS 400	Ethical Hacking	3	Xu/Zahadat
FSCS 430	Forensic Investigations	3	de la Cruz/Zahadat
FSCS 445	Forensic Data Analysis	3	Zahadat/Xu
FSCS 480*	Forensic Documentation	3	Everett/Tumosa
FSCS 482*	Moot Court	3	Hall/Rosenblatt
FSCS 487*	Field Internship in Forensic Science	3	All
FSCS 490	Forensic Incident Response-Capstone	3	All
	Total Credits	42	

**Courses already exist in the Forensics Studies – Trace Evidence degree program. Students from both programs will be enrolled in each of these three courses*

Admissions Standards: Students may begin as freshmen at UB or transfer into the program. Transfer students will be expected to have at least a 2.8 grade point average (GPA). Students with a high GPA who have completed an AA or AS in a related cyber forensics discipline will have a clear pathway to advanced studies in their fields with the addition of the Cyber Forensics bachelor’s degree.

Preparation for Further Study: UB has a law school, and high GPA undergraduates may be eligible for UB’s automatic admit program. And the BS Cyber Forensics graduates would directly feed into the MS in Forensic Science Cyber Investigations should they wish to pursue their education further. Accelerated study options may be available to high GPA students.

Program supports the institution’s strategic goals and priorities.

The mission of the University of Baltimore assures that the university’s emphasis on career-oriented education attracts students with clear professional objectives and provides them with a broad foundation of knowledge to meet the rapidly changing conditions of today’s work environment, as well as equipping them with the latest skills and techniques for productive careers in the public and private sectors. The College of Public Affairs, which houses the School of Criminal Justice, seeks to prepare problem-solvers who will analyze policy and lead public, nonprofit, health-care, and third sector organizations of the future. The proposed program aligns with these institutional goals.

As part of its strategic planning process in 2018, the University developed five Signature Areas of Excellence:

- Law, Justice and Public Service
- Business and Entrepreneurship
- Media, Communications and Design
- Behavioral, Health and Human Services
- Cyber, Gaming and Technology

The proposed program in Cyber Forensics bridges the signature areas of Law, Justice and Public Service as well as Cyber, Gaming and Technology. The proposed program builds on the School of Criminal Justice’s history of delivering quality forensic science and cyber investigations education.

The University of Baltimore and the College of Public Affairs excel in the preparation and the delivery of education that has practical application and prepares students for professional careers. The School of Criminal Justice is uniquely situated to provide education to students who seek careers in forensic investigations. The proposed degree program fills a significant gap in undergraduate education in Maryland. The B.S. Cyber Forensics program is a 21st-century reflection of the university's mission to impart knowledge that works and provide students an opportunity to be agents of positive change. The program supports several strategies related to the strategic plan's first goal of focusing on career-oriented professional education.

The proposed B.S. in Cyber Forensics builds on and supports each of the institutional goals set forth by the University of Baltimore and the College of Public Affairs, while also contributing to the university's projected growth goals (plan goal 4). The program will also provide opportunities for the expansion of existing degree programs by attracting students interested in forensic science who might not otherwise pursue undergraduate study at the University of Baltimore. The degree program will develop students' knowledge and skills as experts in the recognition of cybercrimes, thereby preparing them to investigate the expanding area of cyber-related criminal activity. Just as the digital world has grown, cybercrimes are one of the fastest growing areas of criminal behavior in the 21st Century.

Five-Year Funding Plan

- a. Ongoing institutional administrative, financial and technical support of the program.
- b. Continuation of the program for a period of time sufficient to allow enrolled students to complete the program.

As noted above, UB already offers an undergraduate degree and a graduate degree in related fields. These programs have been operating over five years, and the University is confident that this program will be sustainable. The faculty already on staff at UB can offer the BS in Cyber Forensics, and the prospective program director is tenured. That said, the program will also make additional hires through resources already identified once the program is launched. The physical facilities needed for specialized labs are also already in place. Annual technology needs are typically funded using course fees and other discretionary funding to ensure the most up-to-date technology is afforded to students.

In addition, this program targets a key area in Governor Hogan's workforce development initiative for expanding degree programs and is approved for FY21 University System of Maryland Enhancement funding that supports that initiative. The Enhancement funds will support technology resources and personnel. AY21 personnel will include a faculty position and full-time Cyber Lab director, and in AY22 an additional faculty position will be hired. The Enhancement funding also will support ongoing technology costs: in AY21 the technology expansion will include both hardware and software updates in the labs and the installation of virtual learning environment technology. This support will facilitate the program becoming self-sustaining through enrollment before the end of year 5. As the program grows and further enrollment demands are needed to support the program, the institution's financial models are designed to support growth and high-enrolled programs. Through this model, additional lab space can be prepared as demanded by enrollments.

The job growth in this field is expected to continue to increase for the next decade. According to the US Bureau of Labor Statistics (2019), there were 112,300 jobs in the field of cyber forensics and security analysts, the job outlook for 2018-2018 is predicted to grow 32 percent, a rate much faster than the average for all occupations, which is at 5 percent. Based on the market analysis, we anticipate enrollments to increase rapidly in the first several years; and while it may taper off a bit, enrollments are expected to maintain at a robust level. The University anticipates that this program will generate enrollments for at least this coming decade.

B. Critical and Compelling Regional and Statewide Need

- a) Need for advancement and evolution of knowledge
- b) Societal needs, including expanding educational opportunities and choices for minority and educationally disadvantaged students at institutions of higher education
- c) The need to strengthen and expand the capacity of historically black institutions to provide high quality and unique educational programs

Maryland is one of the top employing regions for forensic science investigators in the US, with the Washington, D.C.-Baltimore metro area ranking fourth in the country (US Department of Labor's Bureau of Labor Statistics, 2019). The job market in the Maryland-Washington, DC region is expected to grow by 8 percent annually, with an annual growth rate of 270 new positions. Forensic investigators may seek employment in local, state and federal governments, corporate and private businesses, financial institutions, hospitals, schools, and non-profit organizations. Today, most organizations and governmental agency require cyber forensics experts to protect and manage cyber technology and systems. The proposed program targets a key area in Governor Hogan's workforce development initiative for expanding degree programs and has been approved for FY21 funding through the University System of Maryland to support State priorities.

The University of Baltimore has one of the state's most diverse student populations, and most students are from the great Baltimore region. The proposed program will help expand educational opportunities in this area in what is a high-demand and high-growth field. The workforce demand for an increase in the number of hires in the area of computer and digital forensic investigators surpasses the current capacity of qualified workers.

UB's program will not infringe on the ability of historically black institutions to offer high quality and unique educational programs.

Evidence that the perceived need is consistent with the Maryland State Plan for Postsecondary Education *(Student Success with Less Debt)*

The BS in Cyber Forensics can provide students with quality postsecondary education at an affordable, public education price. UB attracts a highly diverse student population and is well prepared to provide students with equitable access and to assist them in succeeding in meeting their educational goals. Goal 3 of the State Plan calls for fostering innovation in all aspects of higher education to improve access and student success. The BS in Cyber Forensics is a unique program in an exciting, cutting-edge field. As students at UB as a whole and particularly in the College of Public Affairs tend to be non-traditional students, we anticipate that this program will attract similar students. Training students in a rapid growth, high demand area would enhance UB's national recognition in providing high levels of social mobility to largely non-traditional and widely diverse students.

The curriculum for BS in Cyber Forensics was developed in consultation with programs at community colleges in Maryland. This level of consultation should ensure that the ability of students to transfer seamlessly from community college programs to the BS degree and thereby complete their education faster (State Plan strategy 6). In addition, this program could potentially provide strong students with accelerated routes through a graduate or law program.

As noted above, the program focuses on a key target in Governor Hogan's Workforce Development Initiative and was provided USM Enhancement Funding for FY21. Recognizing the need for practical experience, the BS in Cyber Forensics has a mandatory internship requirement (FSCS 487). This internship requirement will foster development of partnerships between the university, government and the private sector as these internships are developed. (cf. Strategies 7 and 8 of the State Plan).

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.
2. Present data and analysis projecting market demand and the availability of openings in a job market to be served by the new program.
3. Discuss and provide evidence of market surveys that clearly provide quantifiable and reliable data on the educational and training needs and the anticipated number of vacancies expected over the next 5 years.
4. Provide data showing the current and projected supply of prospective graduates.

The BS in Cyber Forensics program is intended for students interested in pursuing employment in government, private corporations, and nonprofit organizations who desire to advance their competencies in managing advanced technological resources to combat cyber threats, and related crime. It will qualify graduates for positions such as incident response manager, information security supervisor, cyber investigator, forensic analyst, law enforcement, private investigator, corporate security manager, and fraud manager. Job opportunities may include:

Cyber Investigator	Health Care Fraud Management
Forensic Analyst	Intelligence Analyst
Private Security Investigator	Independent or Internal Auditing
Government Accounting	Cybersecurity Investigator/Analyst
Digital Forensic Specialist	Forensic Examiner
Cyber Threat Investigator	Incident Forensics Specialist
Senior Network and Threat Specialist	Intelligence Research Specialist/ Analyst
Forensics Technician	Cyber Defense Forensics Analyst

The program, developed in consultation with the local community colleges, FBI representatives, and statewide law enforcement, is intended for members of private corporations, nonprofit organizations, and governmental agencies who desire to advance their competencies in managing advanced technological resources to combat cyber threats, and cybercrimes. Students who have not yet been employed will benefit from the expertise of other students and will be required to gain job experience in the field through a required internship.

Cybersecurity is a fast-growing market with tremendous career opportunities; cyber-crime is now the number one threat to United States national security (USDOD, 2020). As the number of large-scale data breaches and cyber-attacks continue to rise year after year, there is an increasing need for educated and dedicated cyber professionals to protect our nation, businesses, and individuals from cyber threats. In 2018, the U.S. Department of Commerce estimates that there are approximately 350,000 cybersecurity jobs currently unfilled in the U.S. Cybersecurity Analytics and Cybersecurity Ventures predict that there will be 3.5 million unfilled cybersecurity jobs globally by 2021 (Cybersecurity Ventures, 2017); these estimates are before the new field of cyber forensics and investigations fully develops and new jobs are added to the job listings. The cybersecurity unemployment rate has effectively been at zero percent for the last 8 years. Recent figures indicate that in the past 12 to 24 months, there have been 700,000 to 1 million tech job openings, with cybersecurity positions making up 32-45 percent of all US tech job openings.

Maryland is viewed as the US Headquarters for cybersecurity with more than 110,000 cyber-related jobs, and 40 government agencies with strong cybersecurity programs (Martin, 2019). Maryland leads the US in

cyber employment for classified national-state jobs. According to the Maryland Chamber of Commerce, there are currently, over 15,000 open cybersecurity jobs in Maryland.

The most recent employment data (2019) from the Bureau of Labor Statistics (BLS) affirms the demand for employees in cyber security related work, both within government and in the private sector with 112, 300 jobs available at the bachelor's degree level. The BLS predicts that the job growth rate into 2028 will increase by at least 32 percent, which is much faster than average for all occupations.

The Baltimore-Washington region has one of the highest concentrations of job opportunities in the country for computer forensics and cybersecurity related positions. The average salary for the greater Baltimore-Washington, DC-Northern VA regions, where BLS provides statistics, is over \$107, 960. In Maryland, 68,000 people are employed in security-related occupations, and BLS data show that 20,516 jobs are currently vacant in Maryland alone; and another 50,000 in Virginia (Cyberseek, 2020). The Md-DC-VA region has over 14, 540 open jobs; with 2,610 of those jobs in Baltimore-Columbia-Towson, Maryland (BLS, 2019). A recent search of Indeed.com, a jobs website, indicates over 914 job openings at all levels in cyber security in Maryland, with a third of these jobs at starting salaries of \$50,000 or more. LinkedIn.com reported over 10,000 positions in the Baltimore-Washington region as of July 2019.

The bachelor's-level education this program provides would enable current employees at entry-level positions to move up to positions of greater responsibility and pay, and it would prepare students for professional positions in the field.

References:

- Cybersecurity Ventures (2017) <https://cybersecurityventures.com/jobs/>
 Cyberseek (2020) <https://www.cyberseek.org/heatmap.html>
 Martin, James (2019). Top 10 Global Cybersecurity hubs for 2019. CSO – United States. (April). <https://www.csoonline.com/article/3390222/top-10-global-cybersecurity-hubs-for-2019.html#slide5>
 Maryland Chamber of Commerce (2019) <https://mdchamber.org/marylands-leading-industries/>
 Maryland Department of Labor (2020) <https://www.dllr.state.md.us/>
 U.S. Department of Commerce (2020) <https://www.commerce.gov/issues/cybersecurity>
 U.S. Bureau of Labor Statistics (2020) <https://www.bls.gov/ooh/computer-and-information-technology/information-security-analysts.htm>

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.

The proposed program does not duplicate any other program in Maryland. It will be the only cyber forensics bachelor's degree program. There are associate degree programs at the community colleges that will prepare students for the BS in Cyber Forensics. There is one graduate certificate program in Cyber Forensics that was recently approved at UMBC.

While there are several undergraduate bachelor's cybersecurity programs, the curriculum for the undergraduate cybersecurity programs are based on computer security and prevention of security breaches. The proposed program curriculum is based on forensic investigations and evidence collection; therefore, the program focuses on responding to criminal behavior and intentional attacks on computer and digital technology, investigating incidents, and gathering evidence that may be used in court to prosecute offenders. The BS degree program is a uniquely defined area within the forensic discipline because of its emphasis on cybercrime, particularly that which occurs within the workplace. **Currently, there are no cyber forensic**

bachelor's degree programs offered at any other USM institution, or any private or HBI institution within Maryland.

2. Provide justification for the proposed program.

This is a unique program in a high-demand area of the workforce. Many of the major national security risks involve technology threats from cyber-espionage, computer and financial crimes, hacktivism, the proliferation of mobile devices, social engineering, phishing and malware, advanced persistent threats and attacks on critical infrastructures. The increasing internationalization of the world's economies, coupled with global networks, electronic commerce, foreign direct investment, and capital flows, has facilitated financial crime and other attacks. Combating cyber threats/attacks effectively requires that we educate investigators and administrators in a "multidisciplinary" manner—i.e., combining several branches of learning into a common forensic studies program - criminal justice, cyber investigations, cybersecurity, incident response management, computer technology, and law and business regulations. A degree in cyber forensics provides the knowledge and skills needed to interpret electronic data to solve crimes; it combines investigative skills with digital technology in the examination and preservation of evidence.

Civil and/or criminal investigations within businesses and public agencies require the same legal understanding and forensic evidence skills and techniques used in traditional criminal investigations. For this reason, forensics will play a critical role as an organizing concept for the development of this program because the systematic collection and presentation of evidence is critical in a court of law. However, knowledge of forensics and criminal justice investigatory techniques alone is not sufficient. We know that law enforcement as well as businesses often lack expertise within their organizations in the fields of computer technology, forensic analysis, incident response management and data privacy protection issues that hamper successful investigations. A new bachelor's degree in this area is well-justified for the State of Maryland.

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 proposed program does not duplicate or compete with the implementation or maintenance of high-demand programs at HBI's.

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

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

It does not have any potential impact on the uniqueness and institutional identities and missions of HBIs.

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

1. Program Establishment and Faculty Oversight

Faculty from the highly successful Master of Science in Forensic Studies—Cyber Investigations met with representatives of Maryland Community Colleges that offer Associate degrees or certificates in Cyber Forensics to design a transfer program at a four-year institution for graduates of these community college programs.¹ This new baccalaureate program will be overseen by the program director of the graduate program and other faculty devoted to both the MS Program in Cyber-Investigations and the Bachelor of Science in Forensic Studies.²

The Cyber Forensics program consists of core courses in forensic investigative techniques, cyber investigations, incident management, data protection, legal aspects of management, infrastructure protection and security, computer and digital forensics, forensic investigations, preservation of evidence, cybercrimes, and forensic data analytic techniques. While all courses will be taught in traditional classrooms, the program's applied pedagogy features an interactive virtual learning environment that provides students access to course scenarios and software both in and out of the traditional classroom experience.

2. Educational Objectives:

The program offers an opportunity for students who are interested in advanced cyber forensics to develop knowledge and skills that will allow them to compete for careers in government and private sector corporations for highly evolving jobs in the cybersecurity field.

Program Outcomes: With the completion of the B.S. Cyber Forensics program, the student should be able to:

- Recognize the many modes of attack through digital space on computer systems and articulate how these relate to criminal acts
- Demonstrate specialized knowledge to remediate such attacks
- Evaluate commercial or governmental programs with regard to criminal attacks
- Design solutions for commercial or governmental programs with regard to criminal attacks
- Effectively manage counter-crime programs

3. Assessment of Learning Outcomes for the Program:

Once approved, the program will fully develop a schedule for assessment and map the level of student competency for each SLO (introduction, intermediate and mastered). The program director will oversee course data collection and program assessment procedures under the direction of the School Executive Director and the Associate Dean. The current graduate program in this area assesses all program SLOs every other year. Adjustments are made to the curriculum and then reassessed in the following year as part of the continuous improvement cycle. It is likely that the undergraduate program will employ a similar format. Results of these assessments will be entered into the university's assessment management software (TaskStream).

As is the case for all USM programs, this program will participate in the 7-year Program Review process that includes a self-study process and external peer evaluation. Finally, as UB is accredited by the Middle States Commission on Higher Education, the overall assessment process at UB was reviewed during the most recent accreditation of the University in 2017.

4. Course Descriptions:

¹As one example, see Howard Community College Programs in Cyber-Forensics (<https://www.howardcc.edu/programs-courses/programs/cyber-forensics-tech-aa/index.html>)

² Courses currently offered in the BSFS program that teach basic principles and skills used in other areas of forensics (such as Moot Court, Forensic Documentation) will be included in the new program.

The BS in Cyber-forensics is a 42-hour program with all 14 courses being required for successful completion.

FSCS 301 Fundamentals of Cyber Forensics (3)

It provides a basic understanding of cyber Forensics and its relationship with networks and operating systems. Recognize threats to an organization and to infrastructure. Also examines the frameworks, roles, and competencies involved with information Forensics. The fundamentals of cyber Forensics that will be examined include network and security concepts, attacker techniques, data security, system and applications security.

FSCS 310 Cyber Crime and the Law (3)

Examines terminology and dynamics associated with business policies and civil, criminal and administrative law in high technology crimes. Explores various laws specific to combatting cybercrimes. Examination of statutory and Constitutional laws, regulations, and Acts, pertaining to the possession, extraction, and analysis of electronic evidence. The legal policies established for the prevention, apprehension, and prosecution of cybercrimes are defined. Protocols for evidence gathering, documentation, and presentation through a proper chain of custody are explored.

FSCS 320 Operating System Forensics (3)

Explore the roles of an operating system, its basic functions, and the services provided by the operating system. Learn the forensic analysis of the three major operating systems (Windows, Mac OS X, and Linux) in the real world. Topics include disk acquisition and analysis, file system forensic, memory acquisition and analysis, timeline investigation, as well as tracking and analyzing operating system configuration settings.

FSCS 325 Mobile Forensics (3)

Provides a framework for learning the latest developments in wireless and mobile communications; the characteristics and operations of wireless network technologies. Examines wireless network principles, protocols, and applications and provides basic knowledge necessary to complete a logical acquisition of digital evidence from mobile devices. Demonstrates the use of wireless networks and mobile forensics investigative techniques and tools. Explains mobile forensics procedures and principles, related legal issues, mobile platform internals, bypassing passcode, rooting, logical and physical acquisition, data recovery and analysis. Some of the topics covered will include hand-on extraction using iOS, PDA, Blackberry and Android platforms.

FSCS 360 Network Forensics (3)

Explores the methodology and procedures associated with analyzing and mitigating threats in a network environment; identification of potential risks, inappropriate software activity, and security breaches. Examines the topologies, protocols, and applications required to conduct forensic analysis in networks. Other topics include an overview of the various types of VPNs and the utility of firewalls and limitations of firewalls. Explains network forensic principles, legal considerations, digital evidence controls, and documentation of forensic procedures. Laboratory exercises will reinforce practical applications of course instruction.

FSCS 375 Scripting for Cyber Forensics (3)

Provides advanced elements of regular expressions in Python; explores scripting languages working with databases, files, Unicode and text encoding, and object-oriented coding in scripting language as it relates to forensics. Examines how to test and debug scripting codes. Builds scripts to automate diagnostics and investigations, and ways to visualize data. The course will teach students to use the scripting libraries as an investigative tool.

FSCS 380 Fundamentals of Cryptography (3)

Introduces the historical and modern cryptography to ensure the confidentiality, integrity, and authenticity of data and communication. Study how cryptographic algorithms and protocols work and how to use them. Topics include symmetric cryptography, asymmetric cryptography, hash functions, as well as various attacks to cryptographic algorithms and protocols. Explores decryption techniques as applied to businesses and to government. Steganography is a process by which information is hidden within other media. Also presents the processes of hiding or encrypting data to inhibit a forensic analysis and of the detection and counter-resolution of hidden information.

FSCS 400 Ethical Hacking (3)

Learn how to apply knowledge of engineering to security evaluations, design and conduct security assessment experiments as well as analyze and interpret the resulting data. Learn various practice techniques for penetration testing and provide various methods of discovering ways of exploiting vulnerabilities to gain access to a system. Understand professional and ethical responsibility. Recognize the need for life-long learning in the quickly changing cybersecurity environment

FSCS 430 Forensic Investigation (3)

Examines the theory, best practices, and methodologies to conduct computer forensics investigations; it includes the ethical issues, evidence collection and preservation, data presentation, and chain-of evidence procedures. Explore current tools and technologies used to analyze, acquire, and organize digital evidence. Case studies are used to illustrate successful and sometimes less successful investigations. An introduction to LAN investigation as well as PC and Mac Forensics will be included.

FSCS 445 Forensic Data Analysis (3)

Learn concepts and techniques related to data analytics and analysis techniques to discover forensic evidence. Applying basic statistical, machine learning, and artificial intelligence tools to describe, visualize, and analyze forensic data collected from computing devices. Focus on detecting anomalies on collected forensic log files.

FSCS 480 Forensic Documentation (3)

Prepares students to document and manage cases properly from inception to successful conclusion. Students gain a basic understanding of investigative and forensic case documentation.

FSCS 482 Moot Court (3)

The skills of courtroom presentation techniques and skills required for qualified expert witnesses, designed to elicit direct, persuasive, and comprehensive testimony relative to evidentiary issues in criminal/civil matters are practiced. Formal reports pertaining to evidence in accordance with the law, explain the scientific methodologies applied, and develop techniques to conduct effective presentations.

FSCS 487 Field Internship in Forensic Science (3)

Provides field experience to students through laboratory assignments with various criminal justice entities. This requirement is completed at the end of the program. Eligible for continuing studies grade.

FSCS 490 Forensic Incident Response – Capstone (3)

Examines the methods, procedures, and policies necessary for a collaborative incident response team. Allows opportunity to review, analyze, and integrate what has been learned in each of the prerequisite courses. Students will learn how Incident response teams organize, identify, and gather evidence using a number of real-world scenario cases related to various aspects of cyber forensics to complete a capstone project that demonstrate mastery of the culmination of the cyber forensics degree program.

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

Students must complete 38 credits of general education in the following areas:³

- Arts & Humanities (6 credits)
- Arts & Humanities – Ethics (3 credits, upper-division)
- Social & Behavioral Sciences (6 credits)
- Physical & Biological Sciences (7 credits)
- Mathematics (3 credits)
- English Composition (6 credits to include WRIT 101 and 300)
- General Education Electives (7+ credits)

In addition, students must meet Graduation Requirements in four areas. Courses within the major or in the overall general education curriculum can fulfill these requirements. Apart from the capstone, it may also be possible to transfer in credits that could meet a graduation requirement; students may ask advisors about their specific cases and course equivalencies. UB courses seeking to fulfill graduation requirements are reviewed by UB's General Education Committee to see if they meet the SLOs for these areas⁴:

- Global Awareness and Diversity: students will be directed to courses that have been certified to fulfill this requirement.
- Information Literacy: If one or more courses in this major satisfy these GR SLOs, they will be nominated for certification by the General Education Committee. In addition, freshmen typically take INFO 110.
- Oral Communication: students will be directed to courses that have been certified to fulfill this requirement
- Technological Fluency: If one or more courses in this major satisfy these GR SLOs, they will be nominated for certification by the General Education Committee.
- Capstone Experience: FSCS 490 will be designed to meet the SLOs for this requirement.

Transfer Students: As this program was developed in consultation with community college faculty, it is anticipated that a sizeable proportion of students matriculating in the program will transfer with their AA or AS degree, which would mean all general education at the lower-division level has been completed. Articulation agreements will be developed to assure ease of transfer. In general, transcripts are evaluated by admissions and transfer evaluators for meeting General Education requirements as well as graduation requirements and electives.

- Students missing lower division General Education courses after review will be directed to lower-division courses offered at UB;
- Upper division general education requirements: Ethics Requirement (IDIS 302 or PHIL 301) and English Composition (WRIT 300) are offered regularly during the Fall and Spring semesters at UB in both online and face to face modalities.
- Transfer students must also satisfy Graduation Requirements through general education classes or classes in the major.

³ A list of courses meeting General Education requirements by area can be found at: <https://www.ubalt.edu/academics/undergraduate/general-education/gen-ed-2017.cfm>

⁴ The SLOs for each General Education area and Graduation requirements can be found at: <http://www.ubalt.edu/academics/undergraduate/general-education/gen-ed-SLO.cfm>

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

Not applicable

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

Not applicable

8. Provide assurance and appropriate evidence 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 resources, and costs and payment policies.

Once approved, a set of program pages will be established on UB's website to provide students with current information on curriculum, course and degree requirements, technology competence and other skills required for the degree, equipment requirements for the degree, and links to financial aid and tuition and fee costs. If a course has a lab fee, that is indicated by the course description when the student registers. Also listed are student support services available to the wider university community.

Students at UB are assigned to a professional advisor and must meet with them when they achieve certain credit-hour milestones. In addition, students are provided with degree requirements sheets by their advisor; these guides to graduation may also be available online through the program pages. These professional advisors are the primary point of contact with the students on curriculum and degree requirements. They may also provide students with referrals to the Achievement and Learning Center, UB's primary tutoring service, which has not only writing and math tutoring but tutoring for other subjects as well. The Center for Excellence in Learning, Teaching and Technology (CELTT) provides a number of video guides for UB's Learning Management System (Sakai).

The students will also be advised by the faculty program director as to the technology competence and skills needed by students in the program. In terms of technical equipment, UB maintains two dedicated digital forensic laboratories for student use. As noted elsewhere in this application, the program will also establish a "virtual" lab for students to complete homework assignments. The University offers computer labs for students to use for free in the Bogomolny Library, the Student Center, and the Academic Center, as well as in specialized labs operated by the programs. Faculty members all have a web page as well, where contact information is listed. Faculty office hours are identified on syllabi.

All such requirements are also part of UB responsibilities through its Middle States regional accreditation.

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.**

Recruitment, advertising, and admissions materials will clearly and accurately represent the proposed program and the services available, as is consistent with standards for Middle States accreditation. UB's marketing professionals have extensive higher education experience. The UB website readily provides information on programs, costs, and services, as well as admission requirements. The Consumer Information web page and UB Fact Book, posted on the Institutional Research page,

provide plenty of information to support advertising materials. The University's undergraduate catalog is updated annually and posted online.

H. Adequacy of Articulation

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

At this time no articulation agreements exist; however, the institution has been in discussions with faculty at community colleges throughout the state to ensure the proposed program curriculum is consistent post-AA and AS undergraduate requirements within the field of cyber forensics. UB prides itself on being transfer-friendly with respect to Maryland community colleges and is open to developing articulation agreements to facilitate transfer into the BS.

I. Adequacy of Faculty Resources

Quality of Program Faculty:

A combination of full-time faculty from the University of Baltimore and selected adjuncts from the commercial and government arenas with appropriate expertise and field experience will teach the courses. *Faculty teaching assignments for the program are noted in the course list on page 2.*

The UB forensics faculty are expert professionals who, in addition to their academic expertise, have acquired decades of practical experience in the investigation and prosecution of crime, cybersecurity and digital forensics. A complement of theoretical and practical expertise, forensic faculty work in metropolitan, state and national agencies and in corporate and private industry; they research with professionals from other countries and consult nationally and internationally. All full-time faculty have terminal Ph.D. in the field, all adjuncts are working in the field and have the appropriate graduate level education to teach in the program. Qualified faculty include:

Weifeng Xu, Associate Professor and MSFS Program Director.
Ph.D. in Software Engineering, North Dakota State University.

His areas of expertise include software security, mining software engineering data, and applied formal methods. He has published more than 50 peer-reviewed papers in international journals and conference proceedings, including prestigious venues such as IEEE Transactions on Dependable and Secure Computing and IEEE Transactions on Reliability. He was successfully awarded over \$1.5M in research grants from NSF, DoE, and General Electric.

Nima Zahadat, Assistant Professor and USG MSFS Program Director
Ph.D. in Computer Science, The George Washington University

Dr. Zahadat has spent most of his career in high education or professional training. He has more than 20 years as a trainer/educator. He has written curriculum for numerous programs and courses. He currently teaches in the MSFS Cyber Investigations program and serves as the Program Director of that program at the USG campus.

Melvin de la Cruz, Assistant Professor, MSFS Program
Ph.D. in Linguistics, Forensic Speech Science, University of Huddlesfield (U.K.)

Most of Dr. de la Cruz's professional experience has been in federal law enforcement. He has 14 years of experience working with the US Department of Labor, US Department of Homeland Security, and the US

Department of Justice as a federal agent. While working full-time for the federal government, he taught Criminal Law, Statutory Law, Ethics and Advanced Firearms, and he also taught algebra and analytical geometry, calculus, and administration of justice courses.

Patricia Hall, Esq., Lecturer, MSFS and BSFS Programs
J.D., University of Baltimore

Attorney Hall has more than 28 years of professional experience in the field of law processing high-technology crime cases. Prior to her appointment as lecturer this year, she had six years' experience as a part-time faculty member in higher education. She has an outstanding background in the legal field and brings enormous professional experience and real-world application of the law and business regulations to the classroom. She currently teaches in UB's MSFS Cyber Investigations and BS in Forensic Science programs.

Donte Leggette, Cyber Investigations Lab Director and Adjunct Professor
MSFS in Cyber Investigations, University of Baltimore

Mr. Leggette has served as the Lab Director for the MSFS Cyber Investigations Program since 2016. His full-time position is with MECU as a network administrator managing the networks security and infrastructure protections. He has 18 years of experience working in IT and cyber security at MECU.

Joshua Rosenblatt, Esq., Adjunct Professor, MSFS Program
J.D., University of Baltimore

Mr. Rosenblatt is a former police officer who has more than 12 years' experience as a practicing attorney. He was the first appointed Chief of Criminal Strategies Unit, Baltimore State's Attorney's Office, before he moved to the Baltimore Police Department's Training Academy faculty as the head of Legal training. He currently teaches in UB's MSFS Cyber Investigations and BS Forensic Science programs.

UB's Center for Excellence in Learning, Teaching and Technology (CELTT) includes among its staff a Director of Online Learning who holds a doctorate in instructional technology and has extensive experience with faculty professional development in the area of online pedagogy. CELTT provides online and in-person opportunities for faculty to learn more about using technology effectively and how to enhance students' learning. There are regular opportunities for faculty fellowships in CELTT, and the new associate director has extensive experience in assessment.

Program faculty are also active in professional organizations, both academic and technical, and maintain currency in their fields through research, grant projects, consulting and collaboration.

J. Adequacy of Library Resources Library Requirements:

UB has a law library as well as the Bogomolny Library, and as a University System of Maryland member, UB has electronic and interlibrary loan access to the entirety of the System libraries.

The materials students need are largely available through open source databases, governmental archives, or are available online through organizations like the Department of Justice, Police Research Foundation, Westlaw, or a variety of professional organizations and businesses. Peer reviewed material in journals is easily accessible through existing library subscriptions.

K. Adequacy of Physical Facilities, Infrastructure and Instructional Equipment (as outlined in COMAR 13B.02.03.13)

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

The program will utilize the current Forensic Computer Laboratories in the Academic Center built for the Master of Science in Forensic Science – Cyber Investigations degree program. Courses with a lab component will need a classroom space that will allow students to break down computer hardware and hard-wire computer workstations and special software tools.

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

The program will not be taught online. However, all students enrolled in the program will have access to a virtual learning environment to complete their external classroom assignments. All students enrolled in the institution have access to the UB email system and technology, and all courses, whether online or face-to-face, have dedicated space on the learning management system (Sakai), where the syllabus and various resources are available. The Center for Excellence in Learning, Teaching, and Technology provides resources and training for faculty and students so they are able to use Sakai resources effectively.

L. Adequacy of Financial Resources:

1. Complete [Table 1: Resources and Narrative Rationale](#). Provide finance data for the first five years of program implementation. Enter figures into each cell and provide a total for each year. Also provide a narrative rationale for each resource category. If resources have been or will be reallocated to support the proposed program, briefly discuss the sources of those funds.

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)	\$177,044	\$213,013	\$285,060	\$328,364	\$344,207
a. Number of F/T Students ^{2a}	17	20	26	30	30
b. Annual Tuition/Fee Rate ^{2b}	\$9,236	\$9,379	\$9,567	\$9,716	\$9,868
c. Total F/T Revenue (a x b)	\$157,012	\$187,582	\$248,743	\$291,476	\$296,032
d. Number of P/T Students	4	5	7	7	9

^{2a} Proportion of students in each category (FT, PT) were calculated using current forensic program students: 78% of students in program are full-time and 22% are part-time. Students may vary from term-to-term as to whether they are full-time or part-time.

^{2b} FT students in Forensic studies generally take 15 credit hours per semester. However, tuition rates do not increase once a student enrolls for more than 12 credits. Projections indicate that the program may attract up to 2 out-of-state students per year and using current Forensic Studies enrollments, all of these students are full-time. However, in-state rates will be used in the revenue calculations. Rates assume a 2% tuition increase per year and a 2% fee increase in year 3 (placing the AY2021 tuition at \$7154 and fees at \$2082).

e. Credit Hour Rate ^{2e}	\$5,008	\$5,086	\$5,188	\$5,270	\$5,353
f. Annual Credit Hour Rate ^{2f}	12	12	12	12	12
g. Total P/T Revenue (d x e x f)	\$20,032	\$25,432	\$36,318	\$36,888	\$48,175
3. Grants, Contracts & Other External Sources	0	0	0	0	0
4. Other Sources ⁵	\$27,500	0	0	0	0
TOTAL (Add 1 – 4)	\$204,544	\$213,013	\$285,060	\$328,364	\$344,207

2. Complete [Table 2: Program Expenditures and Narrative Rationale](#)

Provide finance data for the first five years of program implementation. Enter figures into each cell and provide a total for each year. Also provide a narrative rationale for each expenditure category.

TABLE 2: PROGRAM EXPENDITURES:					
Expenditure Categories	Year 1	Year 2	Year 3	Year 4	Year 5
1. Faculty (b + c below)	\$71,118	\$98,881	\$114,833	\$129,817	\$131,345
a. Number of FTE ⁶	.70	1.1	1.3	1.4	1.4
b. Total Salary ⁷	\$54,121	\$77,251	\$89,714	\$101,420	\$103,145
c. Total Benefits ⁸	\$16,997	\$21,630	\$25,119	\$28,397	\$28,200
2. Admin. Staff (b + c below)	\$5107	\$5208	\$5310	\$5413	\$5515
a. Number of FTE	.1	.1	.1	.1	.1
b. Total Salary	\$3,990	\$4,069	\$4,149	\$4,229	\$4,309
c. Total Benefits	\$1,117	\$1,139	\$1,161	\$1,184	\$1,206
3. Support Staff (b + c below)	\$37,425	\$38,071	\$38,817	\$39,563	\$40,309

^{2e} The PT in-state rate for a 6-credit hour semester is used here. With the proposed 2% increase for AY 21, tuition would be \$1958 and fees would be \$546. Part-time tuition and fee increases are estimated in the same manner as full-time.

^{2f} Part-time forensic studies students take (on the average) 12 credit hours per year.

⁵ Line 4 Resources – USM Enhancement Funds grant, part of which is assigned to this program for initial technology needs.

⁶ Faculty teaching in this program also teach in the undergraduate Forensic Studies program and the graduate program in Cyber Investigations. Therefore, the FTE is calculated based on a standard formula that each class constitutes 10% of a faculty members annual workload.

⁷ Total salary is calculated as the proportion of faculty salary devoted to this program. A 2% COLA is added for Years 2-5.

⁸ Benefits are calculated as 28% of salary.

a. Number of FTE ⁹	.5	.5	.5	.5	.5
b. Total Salary	\$29,260	\$29,743	\$30,326	\$30,909	\$31,492
c. Total Benefits	\$8,165	\$8,328	\$8,491	\$8,654	\$8,817
4. Technical Support and Equipment ¹⁰	\$10,000	0	0	0	0
5. Library	0	0	0	0	0
6. New or Renovated Space	0	0	0	0	0
7. Other Expenses ¹¹	\$17,500	0	0	0	0
TOTAL (Add 1 – 7)	\$141,150	\$142,160	\$158,960	\$174,793	\$177,169

Data in Table 2 shows anticipated expenditures for the new program. We anticipate that as the program grows, additional faculty lines will be made available. In addition, we are providing for a one-course release for the program director. As noted in the program proposal, we do not anticipate that new resources will be needed from the library as many of the topical areas relevant to this area are available through ResearchPort. Staff assistance to faculty will be provided through the Academic Program Specialist assigned to the School of Criminal Justice. Student advising will be undertaken through the College of Public Affairs Advising staff.

M. Adequacy of provisions for evaluation of program (as outlined in COMAR 13B.02.03.15)

Procedures for conducting program and individual course evaluations will be outlined in a program assessment plan, which is required of every program at the University. An Assessment Plan will be developed for the BS Cyber Forensics degree prior to the implementation of the program, and the plan is documented in TaskStream, the University's assessment management system. The plan will identify overall program learning objectives and measurable course-level objectives for each of the required courses for the program; the program SLOs are mapped to courses as part of the assessment planning. The plan will also outline a process for setting student learning goals and objectives; shared governance processes at UB have new courses with the SLOs reviewed up to the provost. Assessment of all program SLOs will be conducted at least once every two years, and the data will be used to identify the strengths and weaknesses of the program to guide faculty in making improvements to the program and to modify as appropriate student learning outcomes. In addition to the internal program and course review process, an external program review will be conducted every seven years. As noted above, that process involves a self-study and external peer review.

⁹ This position is a Digital Forensics Laboratory Director. Half the cost of this position will be charged to the graduate Cyber-Investigations Program

¹⁰ The University was awarded \$20,000 in Workforce Development Funds for Technology Upgrades in the Digital Forensic Labs. Half the cost of these upgrades have been allocated to the graduate program. In the future, technical upgrades are supported through student fees.

¹¹ The University was awarded funding for a Virtual Lab Environment (\$35,000) through Workforce Development Funds. Half the cost was allocated to the graduate program. This effort will also be supported by course fees.

Student course evaluations, course syllabi, course materials, exams, assignment criteria, and classroom peer observation will be used to evaluate faculty annually and as part of the evaluation of teaching that is included in promotion and tenure review processes.

N. Consistency with the State’s minority student achievement goals and in the State Plan for Postsecondary Education.

The B.S. Cyber Forensics Program is committed to minority student achievement and overall student success. The program is in conformance with the University’s recruitment and retention of a diverse student body. UB has a long-standing commitment to the recruitment of a diverse student body and has proactively sought to identify multiple recruitment channels and communication strategies to ensure that there is outreach to a diverse population. The University also has a number of programs in place that will help the program’s diverse student body persist until graduation. The University continuously assesses the success of these programs and has developed an achievement gap plan to further increase minority graduation rates of students. In 2019, the undergraduate graduation rate for African-American students was the same as for white students, and the freshmen-to-sophomore retention rate was well over 80%.

In addition, the University has just launched the Parsons Scholarship program, which is a last-dollar scholarship program that would enable Pell-eligible, full-time students with a Maryland associate degree who transfer to UB to complete their bachelor’s degree for free. The University anticipates that this program could assist many minority students in furthering their education in Maryland.

O. Relationship to Low Productivity Programs Identified by the Commission:

Not Applicable.

P. Adequacy of Distance Education Programs (as outlined in COMAR 13B.02.03.22)

While UB is approved to offer distance education—and has been offering online degrees for 20 years--the proposed program will be taught in traditional classrooms and laboratories. Students will, however, have full access to an interactive virtual learning environment for use outside the classroom to complete course assignments, and courses will, like all UB courses, have dedicated space on the learning management system.

Off-Campus Delivery of Program

The program will only be offered at the University of Baltimore campus.



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

TOPIC: University of Maryland, Baltimore: Master of Science in Global Health

COMMITTEE: Education Policy and Student Life

DATE OF COMMITTEE MEETING: Tuesday, May 5, 2020

SUMMARY: The Master of Science (M.S.) in Global Health program will be a predominantly online, 31-credit program. The proposed degree will allow students to be trained in best practices of global health education, research, and practice and to specialize in one of three areas of concentration, which are also designed to be PBCs. The M.S. in Global Health program will be organized around a completely online core curriculum (19 credits). The areas of concentration include: 1) Implementation and Dissemination Science (online, existing PBC); 2) Global Health Program Monitoring and Evaluation (online, proposed PBC); and 3) Global Health Innovation (10-week study abroad in Costa Rica, existing PBC). We would also like to make available a fourth option of a generalized 31-credit master's with no area of concentration; the curriculum which would consist of the online core and a representative selection of credits from each of the other, existing areas of concentration/PBC's. Finally, students are required to complete a research seminar (online) followed by a capstone project (online) on a global health topic chosen in cooperation with UMB faculty. Full- and part-time plans of study will be available to students.

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 fees revenue.

CHANCELLOR'S RECOMMENDATION: That the Committee on Education Policy and Student Life recommend that the Board of Regents approve the proposal from University of Maryland, Baltimore to offer the Master of Science in Global Health.

COMMITTEE RECOMMENDATION:

DATE: May 5, 2020

BOARD ACTION:

DATE:

SUBMITTED BY: Joann A. Boughman

301-445-1992

jboughman@usmd.edu



Dr. Roger J. Ward, JD, MSL, MPA
Interim Provost and Executive Vice President
Dean, Graduate School

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April 7, 2020

Jay A. Perman, MD
Chancellor
University System of Maryland
3300 Metzerott Rd.
Adelphi, MD 20783

Dear Chancellor Perman:

The University of Maryland Graduate School is seeking authorization from the Maryland Commission on Higher Education to offer a Master of Science (M.S.) in Global Health program. The University is submitting a proposal to MHEC at this time, as well.

The program will be organized around a completely online core curriculum global health coursework and one of three areas of concentration. The areas of concentration include: 1) Global Health Epidemiology and Research; 2) Global Health Delivery and Practice; and 3) Global Health Innovation, a 10-week study abroad experience in Costa Rica. Unfortunately, the Global Health Innovation program is on hold due to the COVID-19 pandemic, however, we plan to launch it when it becomes prudent to do so.

UMB's mission is to improve the human condition, and we have long been engaged in global health to further this cause. Last year, more than 700 students, faculty, and staff made 1,537 visits to 62 countries. They worked on global health projects with impact including vital initiatives of health, well-being, and justice. UMB is home to the premier Center for Vaccine Development and Global Health, which has made profound advances in vaccinology over the past 40 years. Another of our global health successes is the Institute of Human Virology, an international pioneer in combating HIV/AIDS and other infectious diseases like Ebola. UMB employs approximately 1,200 program staff and community health workers at our international sites, along with 86 support staff. These UMB global health practitioners train, treat, and serve some of the most vulnerable people on the planet. Graduate School now aims to augment its deep global health engagement by offering graduate-level training in the discipline.

Thank you for giving consideration to our proposal. Please contact me if you need further information.

Sincerely,

A handwritten signature in black ink, appearing to read "Roger J. Ward".

Dr. Roger J. Ward, JD, MSL, MPA
Interim Provost and Executive Vice President
Dean, Graduate School

UNIVERSITY SYSTEM OF MARYLAND INSTITUTION PROPOSAL FOR

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

University of Maryland, Baltimore

Institution Submitting Proposal

Master of Science in Global Health

Title of Proposed Program

Fall 2020

Master of Science

Award to be Offered

Projected Implementation Date

51.2210

Proposed HEGIS Code

Proposed CIP Code

University of Maryland Graduate School

Department in which program will be located

**Dr. Flavius Lilly
Senior Associate Dean**

Department Contact

(410) 706-7767

Contact Phone Number

flilly@umaryland.edu

Contact E-Mail Address



Signature of President or Designee

April 7, 2020

Date

**A PROPOSAL FOR A NEW ACADEMIC PROGRAM at THE UNIVERSITY OF MARYLAND, BALTIMORE
FOR A MASTER OF SCIENCE IN GLOBAL HEALTH**

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A. Centrality to Institutional Mission and Planning Priorities:

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

The University of Maryland, Baltimore (UMB) submits this proposal to create a Master of Science in Global Health. We intend to offer it as a predominantly online, 31-credit program. The proposed degree will allow students to be trained in best practices of global health education, research, and practice and to specialize in one of three areas of concentration, which are also designed to be PBCs. The M.S. in Global Health program will be organized around a completely online core curriculum (19 credits). The areas of concentration include: 1) Implementation and Dissemination Science (online, existing PBC); 2) Global Health Program Monitoring and Evaluation (online, proposed PBC); and 3) Global Health Innovation (10-week study abroad in Costa Rica, existing PBC). We would also like to make available a fourth option of a generalized 31-credit master's with no area of concentration; the curriculum which would consist of the online core and a representative selection of credits from each of the other, existing areas of concentration/PBC's. Finally, students are required to complete a research seminar (online) followed by a capstone project (online) on a global health topic chosen in cooperation with UMB faculty. Full- and part-time plans of study will be available to students.

A proposal for the PBC in Global Health Program Monitoring and Evaluation has been submitted concurrently to MHEC for review.

The curriculum for the proposed M.S. in Global Health and the PBC in Global Health Monitoring and Evaluation are informed by the Consortium of Universities for Global Health (CUGH) competencies for global health education (www.cugh.org/resources/2063). These competencies are peer-reviewed and were first published in 2017 but continue to be updated by notable global health scholars, researchers, and practitioners. Approximately 75% of the M.S. in Global Health, and 25% of the PBC in Global Health Monitoring and Evaluation curriculum already exist at the University because of the institution's longstanding work internationally and its commitment to improving health not only in Maryland, but worldwide.

UMB's mission is to improve the human condition, and we have long been engaged in global health to further this cause. Last year, more than 700 students, faculty, and staff made 1,537 visits to 62 countries. They worked on global health projects with impact including vital initiatives of health, well-being, and justice. UMB is home to the premier Center for Vaccine Development and Global Health, which has made profound advances in vaccinology over the past 40 years. Another of our global health successes is the Institute of Human Virology, an international pioneer in combating HIV/AIDS and other infectious diseases like Ebola. UMB employs approximately 1,200 program staff and community health workers at our international sites, along with 86 support staff. These UMB global health practitioners train, treat, and serve some of the most vulnerable people on the planet. Now we aim to augment our deep global health engagement by offering graduate-level training in the discipline.

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

UMB has a long history of developing a qualified workforce in global health. The M.S. in Global health continues this tradition by recognizing the disciplinary distinctiveness of global health. The new M.S. in Global Health will train students for careers as future leaders prepared to address real-world issues affecting the human condition. The curriculum, which represents the essential orientation to the field of global health; captures the notion of praxis and prepares

students for multiple employment opportunities that will positively transform health and well-being of people across the world.

The M.S. in Global Health program directly aligns with the first theme of UMB's strategic plan: "Health, Justice, and Social Impact." The strategic objective of this theme is to "deepen and expand local and **global engagement** by providing health, legal, and social work programs and engaging in research to promote social justice and improve health." The intended outcomes of this work are to leverage "institutional expertise and knowledge to tackle systemic problems impacting local and **global communities**," and position UMB as an "anchor institution at the forefront of finding solutions to local and **global health** disparities and social injustices."

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 proposed program will be well-resourced as there is an already existing faculty and coursework to support the proposed M.S. in Global Health. There is a total of 31 credits required to complete the degree and 55 total credits available when factoring in elective courses. Among the sum of 55 credits available in the program only 15 credits (or five courses) need to be developed to align our M.S. in Global Health curriculum with the competencies set forth by the Consortium of Universities for Global Health. In other words, the UMB Graduate School has the capacity to offer the proposed degree program within existing resources and to ensure continued funding to support the program into the foreseeable future even if enrollment should not meet our expectations, which we do not anticipate.

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

The UMB Graduate School has an ongoing commitment to sustaining new degree programs it has developed. The Graduate School has committed significant resources in the realm of administrative support including a senior associate dean, assistant dean, and program director who will provide leadership for the quality and sustainability of the M.S. in Global Health. Additionally, the Graduate School plans sufficiently to ensure the financial viability of all new degree programs including the provision of faculty instruction and advisement at a level to ensure a high touch learning experience for students. The Graduate School has also invested in technical assistance through our centralized Center for Information Technology Services and the Faculty Center for Teaching and Learning, which both assist our faculty and students in their success as teachers and learners, respectively. If for some unforeseeable reason the Graduate School discontinues the M.S. in Global Health, then we are committed to a teach-out plan for all enrolled students, so they may complete the program and earn their degree.

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

Secretary of Education, Dr. James Fielder in his opening letter in the 2017-2021 Maryland State Plan explains that Maryland's students are "entering an economy that is challenging, innovative, **global**, and diverse." The Secretary's sentiments are reflected in a growing interest in global education and in global health as an academic discipline. Students at all levels – sometimes as early as high school – are participating in projects and programs related to addressing health disparities outside of their home countries. The best of these programs helps students use the transformative experience of international immersion to approach domestic social challenges with new ideas and enhanced problem-solving skills. These skills earned by Maryland students will undoubtedly benefit the state. More American students are entering undergraduate, graduate,

professional school, and even residency programs having amassed international experiences and are seeking advanced training in the budding field of global health.

The 2017-2021 Maryland State Plan articulates three primary goals for postsecondary education: access (ensure equitable access to affordable and quality postsecondary education all Maryland residents); success (promote and implement practices and policies that will ensure student success); and innovation (foster innovation in all aspects of Maryland higher education to improve access and student success). The proposed M.S. in Global Health aligns well with the State Plan.

Relative to “Access,” placing the bulk of the program online offers non-traditional students a pathway to earning their M.S. in Global Health in a format that allows them to balance their educational objectives with competing demands of family and work. The curriculum itself also focuses on innovation with one area of concentration focused on “global health innovation” in which students have a multi-sectoral immersion experience in Costa Rica. Finally, regarding “Success,” programs such as UMB’s M.S. in Global Health are expected to attract students from diverse backgrounds originating both locally and internationally. UMB has a full-service student support model to ensure early identification of students who may be struggling academically and to intervene to improve the likelihood of graduate school completion.

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

At UMB, we find that many applicants inquire about institutional global health opportunities during their interviews for nursing, pharmacy, social work, medical and dental school – a clear indication that global health offerings are an important factor in their school selection process. Beyond UMB’s existing students who may elect to complete a dual degree in professional education (RN, PharmD, MD, MSW, DDS) and a M.S. in Global Health, we expect interest from adult learners in the fields of health administration, research, non-governmental organizations, multi-sectoral development agencies, government, and policy-makers.

Now more than ever, practitioners require preparation in the field of global health. In addition to understanding the grand health challenges that face populations across the world, success in the field of global health requires a body of skills that are tailored to the essential work of the field – engaging with communities, working with partners and stakeholders, implementing programs, and evaluating outcomes. Interdisciplinary in nature, UMB’s proposed M.S. in Global Health seeks to address health issues that have global impact such as the spread of infectious disease, migrant health, child and maternal health, health equity, and nutrition. In addition, the new degree will teach students how to practice global health with transferable program and evaluation skills that can be adapted to the multitude of settings where global health is carried out. As global health emerges as its own academic and clinical discipline, UMB must lead by offering specialized curricular training and co-curricular opportunities. The University is uniquely positioned to deliver this new degree program by leveraging its existing global network, global centers of excellence, coursework, and extensive infrastructure that extends across the world.

Global health spending is expected to increase by an annual average of 6% from 2013 through 2019. In the United States private companies like pharmaceutical producers, hospital systems, non-governmental agencies, and the U.S. government have increased their global investments. To realize these investments, a health workforce is needed that is familiar with the discipline of global health and who can support the development of other nation’s health workforces. A relatively recent (2014) Deloitte report states that, “workforce shortages are a major contributor to health care access problems around the world.” The World Health Organization (WHO)

estimates a shortage of approximately 9 million global health workers and that this shortage will grow to 12.9 million workers by 2035.

WHO and other international reports specifically cite the need for clinical practitioners who are familiar with global and country health systems and their challenges and who have managerial skills. They state that the health clinical workforce must be sensitive to country cultures, health regulations, and health delivery structures. (A Universal Truth: No Health without a Workforce, 2014.) Global Health training and education are essential for managerial and health services practice positions in the developing world.

The U.S. plays a leadership role in training and supporting a global health workforce and that leadership role begins with educating our domestic health workforce on global education. UMB graduates professional students in many health disciplines. The proposed M.S. in Global Health will enable students and other health workers to contribute to global health services, either through short-term projects or through longer term employment.

The Washington DC / Maryland corridor is the center for agencies and organizations involved in Global Health, being the home to the largest concentration of different global health related institutions and funding sources in the world. These include:

- bi-lateral and multi-lateral government supported agencies,
- philanthropic foundations and organizations,
- legislative bodies formulating health services priorities,
- policy and research think tanks,
- and most importantly, a significant number of NGOs and consulting firms working in collaboration with funders and with national governments.

These companies work throughout the world to strengthen health care systems and their own delivery of health services. Some of the best known of these organizations include Family Health International (FHI), Population Services International (PSI), and John Snow International. Non-profit associations such as Catholic Relief Services (CRS), Save the Children, and World Learning, as well as health care organizations such as The University of Maryland School of Medicine and Johns Hopkins University work globally. In addition, a number of foundations, such as The Gates Foundation, and pharmaceutical companies have offices in this area.

Enrollment for the proposed M.S. in Global Health will likely originate from four sources:

- Those working in health care policies, systems, practices who are interested in furthering their global health skills.
- Staff working for companies with a global health presence.
- Clinicians and health administrators interested in increasing their knowledge and skills in the global arena.
- Current students from UMB interested in working globally.

To enroll in the M.S. in Global Health individuals must have a Bachelors' Degree or Master's Degree, with a strong interest in global health. Graduates with a M.S. in Global Health may pursue global assignments through their current workplace or go to work for:

- In-country field consultants
- Disaster relief organizations
- Immigrant/refugee health organizations
- Research and academic institutions
- International agencies
- Other non-governmental agencies (NGOs)
- Lending agencies that do work in developing countries
- Multi-lateral agencies (such as WHO)

- Governmental agencies (USAID, in-country ministry of health, etc.)

Given increasing investments in global health, demand for trained staff is expected to remain high. The proposed M.S. in Global Health will build upon participants domestic health skills and provide courses in the different health managerial skills and national health delivery systems needed to operate in the global arena.

D. Reasonableness of Program Duplication

Master's Degrees in Global Health Offered in the Region

We are aware of only one other M.S. in Global Health in our region, which is offered by the **Georgetown University** in Washington D.C. Their program is like the one proposed by UMB as it also aligns with the Consortium of Universities for Global Health (CUGH) competencies for global health education. However, we propose an online pedagogical approach to increase access for post-traditional students who are already in their professional careers. Additionally, UMB must add a M.S. in Global Health to its academic portfolio to continue to be competitive with Georgetown University in proposals for federal extramural funding related to global health work, particularly in the African continent.

We are also aware that Johns Hopkins University offers a Masters of Health Sciences in Global Health Economics in which students study issues related to health care cost and quality and economic evaluations of health programs both domestically and in developed nations. The focus of Johns Hopkins' program in the realm of economics is vastly different than the proposed M.S. in Global Health at UMB.

PBCs Offered by Maryland Universities

UMB is proposing one new PBC in this area, Global Health Program Monitoring and Evaluation, the other two PBCs (Implementation and Dissemination Science, and Global Health Innovation) are already approved. There are existing PBCs addressing global health areas offered by Maryland schools (including UMB) and an additional three offered by Washington D.C. based schools, although there is very little overlap in content. Most focus on public health or specific areas of global health such as tobacco control and nutrition.

1. **Johns Hopkins University** offers a post baccalaureate certificate in Global Health and a Global Tobacco Control Certificate in the Bloomberg School of Public Health. The focus of the Global Health 18-credit certificate is on population health, behavioral health, and disease control. It is offered through online and face-to-face classes. The focus of the Global Tobacco Control Certificate is on one specific area of Global Health: tobacco control.
2. **The University of Maryland College Park (UMCP)** offers an onsite 12-credit Global Health Certificate through their School of Public Health. Its focus is on population and behavioral health, including epidemiology and health promotion. It is not an online program. The global health certificate program is also an area of concentration in the Masters of Public Health program at UMCP.
3. **UMB** has been involved in global health education for many years, which is part of the impetus to offer an M.S. in Global Health. For instance, the **School of**

Medicine offers an area of concentration (4 courses) in Global Health in its Masters of Public Health program. The **School of Nursing** offers a global health certificate in Nursing and includes ten course credits (three three-credit hour courses, one one-credit course) and two course credits in an international health setting of at least one-month duration. Its primary audience is practicing professional nurses who are enrolled in other programs at UMB. Ten of its 12 hours of credit are classroom-based, and two credits are a field practicum. The **Graduate School** at UMB also offers two certificates: 1) Global Health Innovation a 12-credit program offered as an international immersion in Costa Rica; and the online Global Health Systems and Innovation, a 12-credit program that is a partnership with the University of Maryland Global Campus and trains students to engage across complex and multi-sectoral systems to improve global health. The Global Health Innovation and the Global Health Systems and Innovation PBCs will, in part, form the basis for elective study in the proposed M.S. in Global Health.

PBCs Offered by Washington, D.C. Area Universities

1. **American University** offers a Graduate Certificate in Global Environmental Policy that is open to graduate level students in special contract programs who have completed the special prerequisites program of English, mathematics/statistics, computers and economics. The certificate program requires 15 hours of approved graduate level course work. Up to 12 of the certificate credits are transferable to a master's degree program. Students must have at least a 3.0 GPA in certificate courses in order to be awarded a certificate. Their program thus focuses on current students and one area of global health: environmental health.
2. **American University, Education, Teaching & Health** offers a Graduate Certificate in Nutrition Education with a focus on nutrition for health promotion. To qualify for program, applicants have to have received a GPA of 3.00 in previous degree programs. This Graduate Certificate program requires 18 credit hours of approved course work with at least 6 credit hours at the 600-level or above with grades of C or better. The program does not target the general public or global health management and practice.
3. **George Washington University School of Public Health** offers an onsite Global Health Certificate with a focus on public health: population and behavioral health. This program requires 12 credits for current students; 18 credits for non-enrolled students. It does not focus on global health management or delivery.

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

The proposed MS in Global Health does not have relevance to the uniqueness and/or institutional identities and missions of HBIs.

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

The proposed M.S. in Global Health does not have relevance to the identity of HBIs in Maryland. Any student who has attended a regionally accredited institution and completed a baccalaureate degree, including those from HBIs, and meets the admissions requirements is eligible to apply to the program. Graduates of HBIs could improve their competitiveness in the

marketplace and reach their professional goals by enrolling in and completing this degree program.

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.**

The M.S. in Global Health was proposed by the UMB faculty and approved by the faculty shared-governance body, the Graduate Council, in recognition of the compelling need for specific education and training in global health. UMB's global health enterprise is vast with a presence in over 60 countries in which prevention work is carried out, clinical care is delivered, and research is conducted to improve population health.

The faculty realized that the bulk of the coursework required to offer a M.S. in Global Health already exists at UMB and that there was considerable expertise to create a world-class educational experience for students. Consequently, 15 existing courses were selected to be part of the proposed M.S. in Global Health, and an additional 5 courses were planned for development to ensure all the global health education competencies are achieved.

The faculty overseeing the program are listed with their credentials in Section I, subsection 1: Adequacy of Faculty Resources.

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

By the completion of the proposed M.S. in Global Health and consistent with the Consortium of Universities for Global Health (CUGH) competencies, students will be able to:

- **Understand the Global Burden of Disease, and**
 - a) Describe the major cause of morbidity and mortality around the world, and how the risk of disease varies with regions
 - b) Analyze major public health efforts to reduce disparities in global health (such as Sustainable Development Goals (SDGs) and Global Fund to Fight AIDS, TB, and Malaria).
 - c) Validate the health status of populations using available data (e.g., public health surveillance data, vital statistics, registries, surveys, electronic health records and health plan claims data).
- **Understand Globalization of Health and Health Care, and**
 - a) Critically evaluate different national models or health systems for provision of healthcare and their respective effects on health and healthcare expenditure.
 - b) Analyze how global trends in healthcare practice, commerce and culture, multinational agreements and multinational organizations contribute to the quality and availability of health and healthcare locally and internationally.
 - c) Describe how travel and trade contribute to the spread of communicable and chronic disease.

- d) Critique general trends and influences in the global availability and movement of health care workers.
- **Understand Social and Environmental Determinants of Health, and**
 - a) Describe how cultural context influences perceptions of health and disease.
 - b) List major social and economic determinants of health and their impacts on the access to and quality of health services and on differences in morbidity and mortality between and within countries.
 - c) Analyze the relationship between access to and quality of water, sanitation, food and air on individual and population health.
- **Understand Capacity Strengthening, and**
 - a) Collaborate with a host or partner organization to assess the organization's operational capacity.
 - b) Co-create strategies with the community to strengthen community capabilities and contribute to reduction in health disparities and improvement of community health.
 - c) Integrate community assets and resources to improve the health of individuals and populations.
- **Understand Collaboration, Partnering and Communication, and**
 - a) Include representatives of diverse constituencies in community partnerships and foster interactive learning with these partners.
 - b) Demonstrate diplomacy and build trust with community partners.
 - c) Communicate joint lessons learned to community partners and global constituencies.
 - d) Exhibit interprofessional values and communication skills that demonstrate respect for, and awareness of, the unique cultures, values, roles/responsibilities and expertise represented by other professionals and groups that work in global health.
 - e) Acknowledge one's limitations in skills, knowledge, and abilities.
 - f) Apply leadership practices that support collaborative practice and team effectiveness.
- **Understand Global Health Ethics, and**
 - a) Demonstrate an understanding of and an ability to resolve common ethical issues and challenges that arise in working within diverse economic, political and cultural contexts as well as working with vulnerable populations and in low resource settings to address global health issues.
 - b) Demonstrate an awareness of local and national codes of ethics relevant to one's working environment.

- c) Apply the fundamental principles of international standards for the protection of human subjects in diverse cultural settings.
- **Understand Professional Practice, and**
 - a) Exhibit integrity, regard and respect for others in all aspects of professional practice.
 - b) Articulate barriers to health and healthcare in low-resource settings locally and internationally.
 - c) Demonstrate the ability to adapt clinical or discipline-specific skills and practice in a resource-constrained setting.
- **Understand Health Equity and Social Justice, and**
 - a) Apply social justice and human rights principles in addressing global health problems.
 - b) Implement and evaluate strategies to engage marginalized and vulnerable populations in making decisions that affect their health and well-being.
 - c) Demonstrate a basic understanding of the relationship between health, human rights, and global inequities.
 - d) Describe the role of WHO in linking health and human rights, the Universal Declaration of Human Rights, International Ethical Guidelines for Biomedical Research involving human subjects.
 - e) Exhibit a commitment to social responsibility.
 - f) Develop understanding and awareness of the health care workforce crisis in the developing world, the factors that contribute to this, and strategies to address this problem.
- **Understand Program Management, and**
 - a) Plan, implement, and evaluate an evidence-based program.
 - b) Apply project management techniques throughout program planning, implementation, and evaluation.
- **Understand Sociocultural and Political Awareness, and**
 - a) Model the roles and relationships of the major entities influencing global health and development.
- **Understand Strategic Analysis, and**
 - a) Identify how demographic and other major factors can influence patterns of morbidity, mortality, and disability in a define population.
 - b) Execute a community needs assessment.
 - c) Conduct a situational analysis across a range of cultural, economic, and health contexts.

- d) Design context-specific health interventions and evaluations based upon situational analysis.

By the completion of the proposed M.S. in Global Health and consistent with the Consortium of Universities for Global Health (CUGH) competencies, students will be able to:

3. **Explain how the institution will provide for assessment of student achievement of learning outcomes in the program and document student achievement of learning outcomes in the program.**

Faculty will assess student achievement and mastery of learning outcomes in their courses using a variety of assessments including meaningful and substantive contributions to online course discussions, satisfactory completion of assignments and reflections, scores on quizzes and examinations, scores on team collaboration, scores on written essays and term papers, and evaluation of research and capstone project contribution to the field of Global Health.

Students will also have the opportunity to evaluate courses and faculty through a standard evaluation of every course. Formal assessment planning is already in place throughout UMB Schools including the Graduate School. Our approach includes ensuring that student learning is in alignment with course learning outcomes, alignment of mission at institutional and program levels, alignment of mission with learning outcomes, then program outcomes with curriculum, flowing down to course outcomes and assignments. Assessment activities emphasize analysis of results and feedback loops for continuous improvement. Additional evaluation includes tracking of student retention, grade distributions, and cost-effectiveness, and regular academic program reviews consider these factors.

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

Students must complete all the following core courses (19-credits, online), and select one of the three areas of concentration. The fourth option of a generalized 31-credit master's with no area of concentration would consist of the core courses below, and a representative selection of courses within the other areas of concentration. The determined representative selection of the generalized master's with no area of concentration would be at the discretion of the program director.

- **MHS 600**

- **Introduction to Scholarly Writing and Library Resources (1-credit)**

This course is designed to provide graduate-level learners the opportunity to develop skills in both accessing relevant online library resources and engage in scholarly writing. The portion of the course focusing on library resources teach and strengthen lifelong research and information competency skills by introducing student to the nature of research and the role of library in the research process. Students learn the core concepts of information retrieval and essential techniques for finding, evaluating, analyzing, organizing, and presenting information. The topics covered include using online catalogs to locate books and other library resources; developing research strategies; exercising critical thinking to evaluate information; applying critical and search techniques to electronic databases; understanding citation formats and using the internet as a research tool. The scholarly writing of the course will place emphasis on organization, effective conveyance of thoughts through written words, and writing for multiple types of audiences. Students will have the opportunity to improve both

their academic writing and their research skills as they write a literature review or a proposal. Emphasis is placed on conventions of scholarly writing and organizational strategies as well as grammar, editing, and usage.

- **MHS 605**
Perspectives on Global Health (3-credits)
The course provides an overview to the field of global health, it introduces students to major global health challenges, programs the determinants of health and disease, current and emerging global health priorities, policies, evidence base intervention, disaster relief, key legal issues, ethics and models of reform. In addition, particular attention is given to building key student competencies in analyzing national public health trends including major communicable and non-communicable disease burdens, key organizations supporting public health and professional opportunities in global health. Student skills are developed in analysis, leadership, team work and communication in a global context.
- **CIPP 960**
Critical Issues in Global Women's and Children's Health (3-credits)
A comprehensive multidisciplinary examination of the complex issues related to women and children's health across the globe. Based on the World Health Organization's 2007 Framework for Action for strengthening health systems and the United Nation's Millennium Development Goals and Universal Declaration of Human Rights. Topics include biological and medical issues, reproductive health, violence against women and children and its impact on health, infectious and chronic disease, and the relationship of environmental and social issues to chronic disease. Analysis also covers current national, regional and global trends; program and policy responses to these trends; and prospects for the future.
- **GH 652**
Global Health Management and Leadership (3-credits)
This course explores key strategy, management, and leadership practices in global health programs and examines the essential components of best practice global health improvement programs. It is designed to train leaders in the application, testing, and refinement of current frameworks in health care delivery. This course will provide an in-depth review of leadership functions to equip students with the knowledge and skills to understand, organize, and manage complex global health delivery organizations. Students will study the theory and practice of health care delivery, various roles within the health system, and how global health delivery organizations function. Students will apply their learning in case-based situations and deploy procedures and processes to effectively improve health outcomes.
- **ETHC 638**
Issues in International Research Ethics (3-credits)
This course will examine the ethical and philosophical issues raised by research involving human subjects that is conducted in international settings and examine issues involved with the standard of care, informed consent, exploitation, post-trial benefits, and a developmental and organizational model of ethics review systems. By the end of the course, students will be able to construct and support valid arguments in the analysis of exploitative research; analyze ethical questions regarding international collaborations in research, describe methods to achieve a culturally valid

informed consent; describe the issues involved with tissue sample research performed between international partners, and assess an ethical review an international protocol.

Students must complete the following two courses related to their specific research and capstone project

- **MHS 608**

- **Research Seminar I (3-credits)**

- This course is designed to give students the basic information regarding health sciences research discoveries, draft a research question, and create a literature review plan and paper. Students will analyze and critique research questions, compare and contrast different quantitative and qualitative study designs, and learn to advance knowledge and research dissemination.

- **GH 700**

- **Capstone Project (3-credits)**

- The capstone is designed to demonstrate the substantive application of the knowledge and skills that have been acquired in the courses taken as part of the M.S. in Global Health Program. The capstone functions as the culminating experience for the program. Through the capstone, students will develop a capstone proposal; present their work; and prepare of a capstone portfolio. To meet the needs of diverse learners, students can either complete their capstone online or participate in an international exchange opportunity.

Students choose from one of three of the following Areas of Concentration, which are also PBCs (12 credits)

1) Implementation and Dissemination Science (12-credits, online, existing PBC)

- **MHS 613**

- **Research Implementation and Dissemination I (3-credits)**

- The past several decades has witnessed advances in medical sciences and the discovery of new medicines, vaccines, and diagnostics tools that have the capacity to lead to large improvements in global health. However, the translation of research findings into practice has been slow and uneven. This has led to a widening gap by applying research and evaluation approaches to identify and address the barriers in scale-up evidence-based interventions in local settings. This course provides an introduction to the emerging field of implementations science by reviewing various design and methods, health systems and policy research, and examples in HIV, non-HIV infectious diseases and non-communicable disease.

- **MHS 614**

- **Research Implementation and Dissemination II (3-credits)**

- Dissemination science is the process of distribution of information and intervention materials to a specific public health or clinical practice audience. Translating research into practice is a complex process that involves dissemination science. The purpose of dissemination science research is to translate evidence-based interventions into practice to improve lives. This research seminar provides an introduction to dissemination science. Topics include the vocabulary of dissemination science; distinction between dissemination and implementation research; principles and methods used in dissemination science research; and future issues.

- **MHS 630**
Essentials of Chronic and Infectious Disease Epidemiology (3-credits)
In the past 15 years, we have seen a rise in chronic disease impacted by behavior and policy, infectious disease outbreaks and new mechanisms of spread never seen before in the US. Clinicians must consider the biosocial impact of globalization and environmental change upon health and disease. In this course we present fundamental concepts of epidemiology to assist the new clinician in their efforts to critically evaluate the health and medical literature, participate in monitoring and surveillance of disease, and interpret data in their individual practice, community and nation to improve care in their practice and professional sphere.

 - **MHS 631**
Global Non-Communicable Disease Epidemiology (3-credits)
Non-communicable diseases (NCDs), such as obesity, diabetes, mental illnesses, injuries, cardiovascular disease and cancer, are responsible for the greatest burden of death and disability globally. NCDs are of critical importance to all countries currently dominate the global health and political agenda. Responding to this epidemic requires interdisciplinary, multi-systems, implementation and dissemination approaches. Researchers, public health specialists and policy makers from around the world working in this field require a critical understanding of the commonalities and differences in perspectives across sectors, which will enable them to work effectively within a ‘global’ ecological perspective on NCDs. This course will address the current paradigms and controversies in epidemiology. Emphasis will be placed on those NCDs of high prevalence or unique biological characteristics that illustrate interesting epidemiological or etiological characteristics or those that hold greatest promise of control. Comparison of NCD rates across countries and epochs, and the evidence for the causes of these differences will be explored. The goal is to encourage students to think creatively about the NCD problem and explore research opportunities that will contribute meaningfully to reduction in NCD morbidity and mortality throughout the world.
- 2) **Global Health Innovation (12-credits, 10 weeks, study abroad in Costa Rica, existing PBC)**
- **INNO 801**
Intercultural Communication and Conflict Resolution (1-credit)
Intercultural Communication and Conflict Resolution is a growing area of importance in global health considering the pace and volume of global transactions. The ease of global communication using technology, the abundance of cheaper transportation costs, and the frequency of businesses using cross-border talent is fostering millions of interactions a day between people of different cultures. In this course, students will examine how the process of communication can be further complicated during interactions between people of different cultures. The topics of stereotypes, generalizations, communication styles, communication strategies, and communication orientations will be explored.

- **INNO 802**
Global Health and Social Innovation (2-credits)
 There is a need to challenge the status quo in global health theory and practice. In a world in which complex challenges are ever emerging, there is a growing demand for new system-wide approaches. New knowledge and technologies are a gateway of opportunities for innovation. This course will introduce students to the concepts, theory, and practice of complexity science. It will allow students to approach global health as a complex adaptive system and understand how this is useful to solve some of the most challenging issues faced by practitioners when trying to create lasting social change in an effective and ethical way. Students will learn to understand the nature of complex global health issues and how can they better identify potential avenues to generate social innovations and system-level change. The lectures will be co-facilitated by CISG staff and thought leaders and experts in a wide range of fields, including economics, business, public health, social entrepreneurship, political economy, human rights, ethics, gender, sustainability, and sociology. By participating in this course, students will acquire knowledge, practical tools, and experiences to approach global health through a “complexity lens,” learn about the challenges and opportunities for change agents and systems entrepreneurs in the field, and better prepare them to become global health leaders.
- **INNO 803**
Health Systems: Innovations for Universal Health Care (2-credits)
 A detailed examination and understanding of modern health systems and their multi-layered structures is needed to achieve the goals set out by the United Nations’ Sustainable Development Goals (SDG) agenda. This course will provide students an introduction to health systems and how the historical, cultural, political and economic context impacts their funding, design and performance. The students will acquire the knowledge and skills to think critically on how health systems operate in middle and low-income countries and how to address the determinants of health of these settings. Special emphasis will be given to the case of Costa Rica and how it developed its social security system and one of the most effective primary health care systems in the world. Focus points will be on innovations for equity in health access, healthier communities through health promotion and the use of IT in health care. The students will participate in discussions with an interdisciplinary faculty and with policymakers involved in the design and development of the health system in Costa Rica.
- **INNO 804**
Urban Health and Social Innovation Lab (2-credits)
 The year 2009 marked the year in which, for the first time in the Earth's history, more people lived in urban settings than in rural settings. It is estimated that by 2050, two-thirds of the world’s population will live in an urban environment. This course brings an interdisciplinary approach to provide students the knowledge and skills to address the global health challenges in rapid urbanizing regions of middle and low-income countries. Urban areas present particular health risk factors and complex interactions of issues such as climate change, migration, infectious and chronic diseases, and mental health, which requires practitioners to develop cross-sector collaborations and innovative approaches to public policy. The course will allow students to understand how the social gradient affects populations in urban settings and how to develop health-related interventions that are sensible to the human rights, social and gender disparities in such environments. Students will have the opportunity to learn from

representatives of local governments and non-governmental organizations on how projects to improve urban health indicators are designed, executed and evaluated.

- **INNO 805**

- **Global Health and Social Innovation Practicum (5-credits)**

- This course provides students the opportunity to integrate theory and practice to address real world challenges faced by policymakers and communities looking to create lasting change in the global health area. It will provide students the possibility to engage and support public, private and non-governmental organizations to solve complex issues related to global health in Costa Rica, a developing country with unique demographic, epidemiological and urbanization conditions. After completing their foundational course requirements, students will have their practicum experience either in the southern region of Costa Rica or in San José and its vicinities. Students will be partnered mainly with non-governmental organizations, although opportunities exist for partnerships with other stakeholders, such as government institutions. Potential partner organizations facilitated by CISG include:

- La Casona's bicultural clinic
 - Houses of Joy
 - Rio Sereno Border Crossing
 - Hands for Health Oral Health Protection Program
 - ASCONA National and Environmental Service Association
 - Comprehensive development association of Rincon de Osa and Playa Blanca
 - Comprehensive development association of Dos Brazos de Rio Tigre
 - Las Cruces Biological Station
 - Municipality of Curridabat
 - Instituto Mixto de Ayuda Social (IMAS)Ca
 - Municipalidad de Coto Brus
 - Patronato Nacional de la Infancia
 - Seprojovent
 - Cen-Cinai
 - Hogar de Ancianos

- The student's practicum will be based on the student's specific interest expressed during the initial didactic portion of the certificate. During the practicum, students will conduct a case study to evaluate the innovative work of the organization (or a specific component/initiative of the organization), the process that led to the innovation, the iteration cycles to reach impact, and the product/initiative's sustainability.

- 3) **Global Health Program Monitoring and Evaluation (12-credits, online, new proposed PBC)**

- **GH T.B.D.**

- **Global Health Program Monitoring & Evaluation I (3-credits, new course)**

- Program monitoring and evaluation are essential tools to understanding and judging the impact that global health interventions and policies have in communities. This course introduces students to essential tools and models of both program monitoring and evaluation. Students will understand and analyze the key elements of program monitoring and evaluation: assessing population health needs using qualitative and

quantitative information, identifying key program elements and their implementation, monitoring the program's cost and efficiency, and evaluating the success of implementation, including program outcomes. Particular attention is given to involving key community stakeholders throughout the monitoring and evaluation process. The course emphasizes an interdisciplinary approach to global health program monitoring and evaluation and the skills needed to conduct program evaluations.

- **MHS 610**

- **National/International Approaches to Healthcare Delivery (3-credits)**

- This course applies the concepts, theories, and principles of the field of global health presented in the first course to the practical challenges facing global health professionals. Each student will select a specific global health priority for a given national or geo-politically defined population to examine over the duration of the course. The student's selected case will then be their primary focus for applying needs assessment methodologies, including epidemiological methods, mapping local, national, and global policy processes, identifying strategies for building infrastructure and workforce capacity, analyzing financial opportunities and limitations, and assessing the impact of macro changes in the global economy, political environment, and human rights and legal systems. Each student will complete a final summary project report that will summarize findings regarding scope, options, outcomes, and a recommended action plan for improving the health status of the population group they have studied.

- **GH T.B.D.**

- **Global Health Program Monitoring & Evaluation II (3-credits, new course)**

- This course builds upon Program Evaluation and Monitoring 1 by engaging students in using a health program monitoring and evaluation framework to design credible and feasible global health needs assessments, implementation monitoring systems, and outcome evaluations that involve stakeholders as appropriate. There is a more in-depth analysis of qualitative and quantitative methods including study design and question development frequently used in global health program evaluations. Students learn the importance of an ethical approach to involving stakeholders throughout the monitoring and evaluation cycle that demonstrates integrity and respects people from different cultural backgrounds and communities. Through case studies students will evaluate whether program designs, analyses, and evidence are credible, and conclusions are justified. They will propose how to communicate and use findings and shared lessons learned to improve the health of global communities.

- **GH T.B.D.**

- **Global Disease Control (3-credits, new course)**

- This course provides in-depth knowledge on principles and strategies of disease control and equips students with the necessary skills to successfully establish, strengthen and systematically review disease control programs. The course focuses on disease control in disadvantaged populations of developing countries. It draws on local, regional and global policies and strategies to analyze strengths and weaknesses in disease control. The course places special emphasis on strengthening multi-disciplinary and inter-sectoral collaboration and effectively involving communities and patients in disease control programs.

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

Not Applicable.

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

There are no specialized accreditation or graduate certification requirements for the proposed M.S. in Global Health.

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

The InterAmerican Center for Global Health (CISG) in Costa Rica is our partner in the delivery of the Global Health Innovation area of concentration. Please see Appendix A containing the MOU/contract between UMB and CISG.

7. 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.

The Graduate School maintains up-to-date information of its degree programs on the program explorer web site (<https://www.graduate.umaryland.edu/Program-Explorer/>). The web site has information on the curriculum, course descriptions, degree requirements, and cost of education. The website has links to information about the learning management system, support services, and financial aid. We affirm that the same information will be available for prospective and existing students in the proposed M.S. in Global Health.

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

The Graduate School at UMB affirms that all advertising, recruiting and admissions materials will accurately represent the M.S. in Global Health, as do all materials produced by UMB's Graduate School for programs it offers.

H. Adequacy of Articulation

Not applicable

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 faculty member will teach in the proposed program.

The following table summarizes information about the faculty who will be responsible for designing and instructing coursework in the M.S. in Global Health program:

Name	Terminal Degree and Discipline	Rank and FT/PT Status	Course
Isabell May	Ph.D. American Studies	Senior Lecturer, FT	MHS 600: Introduction to Scholarly Writing and Library Resources
Donald Donahue	D.HEd. Health Education	Senior Lecturer, PT	MHS 605: Perspectives on Global Health
Katherine Marconi	Ph.D. Sociology	Senior Lecturer, PT	CIPP 960: Critical Issues in Global Women's and Children's Health
Katherine Marconi	Ph.D. Sociology	Senior Lecturer, PT	GH T.B.D.: Global Health Program Monitoring and Evaluation I
Flavius Lilly	Ph.D. Gerontology	Senior Lecturer, FT	GH 652: Global Health Management and Leadership
Henry Silverman	M.D. Medicine	Professor, FT	ETHC 638: Issues in International Research Ethics
Man Charurat	Ph.D. International Health	Professor, FT	MHS 613: Research Implementation and Dissemination I
Nadia Sam-Agudu	Sc.D., Epidemiology, Biostatistics M.D., Medicine Surgery	Professor, FT	MHS 614: Research Implementation and Dissemination II
Clement Adebamowa	Ph.D., Sociology	Senior Lecturer, PT	MHS 631: Global Non-Communicable Disease Epidemiology
Niya Werts	Ph.D., Information Systems	Senior Lecturer, FT	MHS 630: Essentials of Chronic and Infectious Disease Epidemiology
Carlos Faerron	M.D., Medicine	Senior Lecturer, PT	INNO 801: Intercultural Communication and Conflict Resolution
Carlos Faerron	M.D., Medicine	Senior Lecturer, PT	INNO 802: Global Health and Social Innovation
Carlos Faerron	M.D., Medicine	Senior Lecturer, PT	INNO 803: Health Systems: Innovations for Universal Health Care
Carlos Faerron	M.D., Medicine	Senior Lecturer, PT	INNO 804: Urban Health and Social Innovation Lab
Carlos Faerron	M.D., Medicine	Senior Lecturer, PT	INNO 805: Global Health and Social Innovation Practicum
Katherine Marconi Bonnie Bissonette	Ph.D., Sociology Ed.D., Higher Education Administration	Senior Lecturer, PT Lecturer, FT	MHS 610: National/International Approaches to Healthcare Delivery
Donald Donahue	D.HEd. Health Education	Senior Lecturer, PT	GH T.B.D.: Global Disease Control
Larisa Odessky	PharmD	Senior Lecturer	MHS 608: Research Seminar I
Carlos Faerron	M.D., Medicine	Senior Lecturer, PT	GH 700: Capstone Project

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

UMB has a robust process for training faculty and ensuring effective instruction. Based on Quality Matters standards, UMB developed a rubric which details the best practices for distance education; this rubric helps faculty and instructional designers create the courses; assesses the readiness of the course and ensures that the online courses are instructionally and pedagogically sound. The best practices are a synthesis of strategies, activities, design techniques, and organizational items that have been successful in higher education. The specific domains of this checklist are as follows:

- Course overview and introduction to the students
- Course organization and design
- Learning Objectives (competencies)
- Instructional Materials
- Learner Communication, Interaction and Collaboration
- Assessment and Evaluation (measurement)
- Course Technology
- Learner Support

The Learning Management Platform UMB utilizes and provides IT support for is the Blackboard Learning Management System for online course delivery. Within Blackboard, is the Collaborate conferencing software that we will use for our synchronous live activities, i.e., orientation and presentation face-to-face class sessions and recurring webinars. Additionally, the Faculty Center for Teaching and Learning which houses expert Instructional and Educational Media Specialists, uses of a video camera to record lectures, integrate webcams, and an interactive smart board. We also use the Camtasia software for screen lecture capture.

J. Adequacy of Library Resources

The University of Maryland, Baltimore's Health Sciences and Humans Services Library (HS/HSL) collection contains more than 30,000 electronic journals, 162 current print journals, approximately 170,000 books, and 6,000 electronic books. Students can access the electronic resources offered on the library web site by logging in with their University ID number. The library serves as the regional medical library for ten southeastern states as part of the national Library of Medicines National network of Libraries of medicine. In addition to the library services and collections, the building also houses the computing services. Faculty librarians are dedicated to providing direct service to students.

K. Adequacy of Physical Facilities, Infrastructure and Instructional Equipment

UMB's 71-acre research and technology complex encompasses 67 buildings in west Baltimore near the Inner Harbor. Faculty have offices provided within their respective departments and the Graduate School has identified office space to house the Program Manager Specialist and instructional technology personnel. UMB has adequate facilities, infrastructure and equipment to support any distance learning needs of the Master's Program. Students will have full access to the computing facilities at UMB. Students will be provided with UMB e-mail and library accounts and will have complete journal searching ability via PubMed. UMB possesses computing facilities that includes a networked computing environment for support of a broad range of information technology functions, including basic research, clinical research, patient information and general office management.

L. Adequacy of Financial Resources with Documentation

No new general funds will be required for implementation of the proposed MS and PBC which will be coordinated and administered fully through the Graduate School. A budget is included in Appendix A.

M. Adequacy of Provisions for Evaluation of Program

Students will have the opportunity to evaluate courses and faculty through a standard evaluation of every course. Formal assessment planning is already in place throughout UMB Schools including the Graduate School. Our approach includes ensuring that student learning is in alignment with course learning outcomes, alignment of mission at institutional and program levels, alignment of mission with learning outcomes, then program outcomes with curriculum, flowing down to course outcomes and assignments. Assessment activities emphasize analysis of results and feedback loops for continuous improvement. Additional evaluation includes tracking of student retention, grade distributions, and cost-effectiveness, and regular academic program reviews consider these factors.

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

UMB is strongly committed to cultural diversity and the recruitment and retention of underrepresented minority students. Recruitment efforts for the M.S. in Global Health will include specific outreach to Historically Black Institutions to make students aware of the program and related opportunities designed to improve their competitiveness in the job market and reach their professional goals if they are admitted and successfully complete the program.

O. Relationship to Low Productivity Programs Identified by the Commission

The proposed MS is not directly related to an identified low productivity program identified by the Maryland Higher Education Commission.

P. Adequacy of Distance Education Programs

Context of Online Education at UMB

As the State's public health, law, and human services university, the mission of UMB is to excel at professional and graduate education, research, patient care, and public service, and to educate leaders in health care delivery, biomedical science, global health, social work and the law. Also, UMB emphasizes interdisciplinary education in an atmosphere that explicitly values civility, diversity, collaboration, and accountability. UMB expects to achieve its mission in education excellence and to be competitive; the Graduate School has designed and offered online degree programs that respond to the following changes occurring in higher education (Allen, 2010).

1. Education Pipeline. The education pipeline includes a highly diverse prospective applicant pool. Prospective students are typically working adults who pursue part-time and non-residential educational opportunities, but who wish to remain in their regional geographic area, while pursuing advanced education. According to the National Center for Education Statistics, National Postsecondary Graduate Student Aid Study (NCES, NPSAS: GR; 2017), between the period of 2008 and 2017, there was a slight increase (3%) in the number of graduate students

reporting full-time (FT) enrollment at a single institution. We suspect this may be partially influenced by availability of new online educational programs, where one can work, be considered enrolled FT, yet negotiate academic studies as one's lifestyle permits.

2. **Changing Demographics.** Data indicate a shift from the traditional student (the 18-22-year-old, full-time resident) to older students studying part-time. In 2015-2016, the National Center for education Statistics (NCES, 2017) reported that 37.58% of graduate students were married and the average graduate student was 32 years old ($SD= 9.66$). Nearly 9% of single/unmarried/divorced graduate students reported dependents, and nearly 60% of graduate students were female.
3. **Technology Shift.** Educational research suggests that online education achieves the same as, or better student learning outcomes, than traditional face-to-face delivery models (Tallent-Runnels, et al., 2006; Means et al., 2009). Online delivery is far outpacing traditional forms of educational delivery. Between 2002 to 2008, online enrollments grew at an annual rate of 19% vs. 1.5% versus all of Higher Education. By the fall of 2008, 25% (4.6 million) of all students took at least one online course. In 2019, the top five highest reported college enrollments nationally four were online universities, offering at least some graduate programs (NCES).
4. **Growth of Mobile Technologies.** Mobile technologies and miniaturization are changing the computing environment and the educational delivery paradigm. Technologies like netbooks, e-Readers, iPhones and iPads have revolutionized the delivery space and to provide anywhere, anytime learning.
5. **Web 2.0 Revolution.** Other technologies that are already figuring widely into the future of education are part of the Web 2.0 revolution. The use of a variety of technologies is disaggregating the educational experience into 'the cloud'. Many of the technologies for the future, like blogs, wikis, podcasts, video, social networking and social media, virtual worlds, mobile learning, and Personal Learning environments, will have profound effects on the future learning landscape.

Essentially, online education represents a strategy that can address the restrictions of traditional onsite college courses, opening up accessibility for variety of learners, for a variety of reasons and expanding access to global education opportunities and expertise, beyond the walls of the campus. Major determinants of successful online programs include 1) course design that incorporates best practices (e.g. course alignment, integration of technology and content), 2) quality faculty who can engage students in the material (e.g. provide feedback and relevant expertise), and 3) provide responsible academic oversight. All three of these determinants are present in this proposal.

Instructional Design Team

The following individuals from the Instructional Design team have been assigned to direct the distance education strategy for the four additional certificate programs:

Christina Cestone, PhD | Executive Director, Faculty Center for Teaching and Learning

Dr. Cestone earned a Ph.D. in Educational Psychology from the University of Texas at Austin and a Master's degree in Human and Organizational Learning from The George Washington University. Dr. Cestone research includes faculty learning communities, instructional methods, motivation, and interprofessional education. Most recently, as Associate Dean of Assessment and Evaluation for Drexel University, College of Medicine, Dr. Cestone directed medical student assessment, and course and curriculum evaluation in an integrated medical curriculum for 1,100 medical students. Her interests are in program evaluation, and curriculum and instructional development involving active learning methods. She presents her work nationally and is active in the American Education Research Association (AERA) and the Professional and Organizational Development Network (POD), a national association of directors of Centers for Teaching and Learning.

Kevin Engler, MA | Instructional and Curriculum Designer

Mr. Engler holds a Masters of Arts degree in Instructional Design. Mr. Engler provides instructional design, audio-visual support, and faculty training in the use of instructional technologies. He is responsible for the overall pedagogy, planning and designing of course content and assessments for distance education courses in the program. Mr. Engler is knowledgeable in adult learning theory, distance education pedagogical techniques, course development planning and process management. Mr. Engler is trained and certified in the Quality Matters methodology and the ADDIE approach to course design. He has experience and background in writing instructional objectives that utilize Bloom's Taxonomy.

Erin Hagar, MA/MFA | Instructional and Curriculum Designer

Ms. Hagar taught Spanish at the college level and has worked in instructional and curriculum design for colleges and universities since 2000. She previously worked at Montgomery Community College and Johns Hopkins University, helping faculty incorporate new pedagogical practices and technologies into their face-to-face and online courses. Her areas of expertise include faculty development and training, online course design using the Quality Matters standards, and authentic activities and assessments. She is responsible for the overall pedagogy, planning and designing of course content and assessments for distance education courses in the program.

Sharon Gillooly | Senior Media Production Specialist

Ms. Gillooly leads media production for the AIDE team. Her main focus is to produce videos that support academic instruction. After a long career in documentary television, she completed a Master's Certificate in Online Instructional Development from Florida State University where her work focused on instructional design and emerging technologies. Ms. Gillooly is especially interested in the use of media to enhance learning.

Eric Belt, MS| Instructional and Curriculum Designer

Mr. Belt holds a M.A., Distance Education & E-Learning from UMUC and a B.S., Business Administration from Towson University. Prior to joining UMB, Eric was the Director of Learning Technology at the College of Southern Maryland and, formerly, the Assistant Director of eLearning at Howard Community College. Eric has served as an Instructional Designer both virtually and on-campus for various community colleges

across the U.S. and is active in the Maryland Online community. Eric brings a skills and interest in advancing the scholarship of teaching and learning through course design, instructional communication, and faculty professional development. Mr. Belt is currently an Educational Technology doctoral student at Boise State University pursuing research in communication, interaction, and engagement in online courses.

Collectively, the distance learning team will provide the following services to ensure that best pedagogical practices are used to train and support the most of effective presentation of their course content.

- Guided tutorials on the online course development process, with open questions and answer session.
- Written instructions accompanied by training videos to guide faculty on how to use the learning management system.
- A manual for the faculty regarding principles of good practice and the pedagogy of distance education.
- Provide timely support to the faculty in the use of the technology and trouble shoot any problems that might arise during the course of instruction.
- Work with faculty to design and develop courses, monitor the delivery of the course, and assess and revise the course for future offerings.

Supporting Students in Distance Education

Most of the courses for the M.S. in Global Health will be online, and others will be in person. We realize that the key to the success of the online courses is dependent on a) students knowing upfront the assumptions, requirements and responsibilities of taking an online course, 2) the ability of students to have the background, knowledge, and technical skills to undertake an online program; and 3) their having access to academic and technical support services to support their online activities. Accordingly, we will provide the following services to support the students in accessing distance learning technology:

- Communicate to students the nature of online learning, including their requirements, roles and responsibilities, and access to support services. All of our advertising, recruiting, and admissions materials shall clearly and accurately represent the program and the services available.
- Ensure that enrolled students shall have reasonable and adequate access to the range of student services to support their learning.
- Ensure that accepted students will have the background, knowledge, and technical skills needed to undertake the program.
- Make available the library Services to students so that they can have access to research databases, online catalog of books and media, chat with or e-mail a Librarian, electronic interlibrary loan, and more.

Evaluation and Assessment of Online Courses

We will adhere to a quality improvement model for assuring the continuous quality of the online courses. The process will involve the following steps:

1. Assessment of course readiness as measured by our quality indicators of best practices (including assessment of faculty readiness)
2. Monitoring of course delivery as assessed by the instructional designers with use of our “course evaluation’ rubric”
3. Obtainment of feedback from the faculty and students and instructional designers.
4. Analysis of feedback as performed by the Distance Learning Committee.
5. Institute course revisions based on comments by the Distance Learning Committee.

Finally, to ensure the sustainability of the distance learning program, the Academic Affairs Office at UMB affirms the following:

- UMB Policies for faculty evaluation includes appropriate consideration of teaching and scholarly activities related to programs offered through distance learning.
- Commitment to ongoing support, both financial and technical, and to a continuation of the program for a period sufficient to enable students to complete a certificate

**APPENDIX A.
BUDGET**

TABLE 1: PROGRAM RESOURCES					
Resource Categories	Year 1	Year 2	Year 3	Year 4	Year 5
1. Reallocated Funds					
2. Tuition/Fee Revenue (c +g below)	\$0	\$57,834	\$73,738	\$105,298	\$122,747
a. Number of F/T Students*	0	4	5	7	8
b. Annual Tuition/Fee Rate	\$14,175	\$14,458	\$14,748	\$15,043	\$15,343
c. Total F/T Revenue (a x b)					
d. Number of P/T Students	10	20	28	30	32
e. Credit Hour Rate	\$668	\$681	\$695	\$709	\$723
f. Annual Credit Hour Rate	13	11	10	10	10
g. Total P/T Revenue (d x e x f)	\$86,853	\$149,922	\$194,626	\$212,698	\$231,415
3. Grants, Contracts & Other External Sources	\$0	\$0	\$0	\$0	\$0
4. Other Sources	\$34,348	\$35,366	\$0	\$0	\$0
TOTAL (Add 1 - 4)	\$86,853	\$207,755	\$268,364	\$317,996	\$354,163

TABLE 2: PROGRAM EXPENDITURES:					
Expenditure Categories	Year 1	Year 2	Year 3	Year 4	Year 5
1. Faculty (b + c below)	\$66,356	\$121,219	\$111,741	\$115,093	\$118,547
a. Number of FTE	0.55	1.02	0.93	0.93	0.93
b. Total Salary	\$53,000	\$96,820	\$89,250	\$91,928	\$94,686
c. Total Benefits	\$13,356	\$24,399	\$22,491	\$23,166	\$23,861
2. Admin. Staff (b + c below)	\$0	\$39,130	\$6,278	\$6,466	\$6,660
a. Number of FTE	0.00	0.33	0.00	0.00	0.00
b. Total Salary	\$0	\$28,050	\$4,500	\$4,635	\$4,774
c. Total Benefits	\$0	\$11,080	\$1,778	\$1,831	\$1,886
3. Support Staff (b + c below)	\$15,345	\$15,805	\$16,280	\$16,768	\$17,271
a. Number of FTE	0.20	0.20	0.20	0.20	0.20
b. Total Salary	\$11,000	\$11,330	\$11,670	\$12,020	\$12,381
c. Total Benefits	\$4,345	\$4,475	\$4,610	\$4,748	\$4,890
4. Technical Support and Equipment	\$20,000	\$5,000	\$5,000	\$5,000	\$5,000
5. Library	\$0	\$0	\$0	\$0	\$0
6. New or Renovated Space	\$0	\$0	\$0	\$0	\$0
7. Other Expenses	\$19,500	\$61,968	\$73,460	\$95,444	\$107,936
TOTAL (Add 1 - 7)	\$121,201	\$243,122	\$212,758	\$238,771	\$255,413

**APPENDIX B.
MOU/CONTRACT WITH CISG**



Joint Collaborative Partnership Agreement

between

The University of Maryland, Graduate School, Baltimore, USA

And

The Inter-American Center for Global Health, Coto Brus, Costa Rica

This Agreement is made and entered into on the date of the final signature hereto, by and between University of Maryland, Baltimore (UMB), a public university that is part of the University System of Maryland, a public corporation and an instrumentality of the State of Maryland acting through its academic department the University of Maryland Graduate School hereinafter referred to as UMGS, and the Inter-American Center for Global Health, hereinafter referred CISG.

1. The Agreement and Nature of Collaboration

- 1.1. The purpose of this Joint Collaborative Partnership Agreement (referred to as the "Agreement") is to delineate the collective and individual responsibilities of UMGS and CISG in relation to the provision, management, monitoring, evaluation and development of a Post-Baccalaureate Certificate (PBC) in Global Health Innovation program for UMGS students.
- 1.2. This agreement will commence on October 1, 2019 notwithstanding the date or dates of signature. The parties will review and evaluate the operation of all matters under this Agreement prior to the 2nd anniversary of the commencement date. Any renewal or amendment to this Agreement will be made in writing.
- 1.3. This agreement will be in effect for a period of five (5) years beginning with the commencement date and will be renewed for successive five year periods in writing agreed upon by the parties. Either party giving six (6) months written notice to the other party may terminate the agreement provided that such termination will not affect the completion of any activity underway at the time or any previously advertised activity in which commitments to university students or faculty have been made.

- 1.4. UMGS appoints Senior Associate Dean Dr. Flavius Lilly (flilly@umaryland.edu), and CISG appoints Director Dr. Carlos Faerron (cfaerron@cisgcr.org) to coordinate the development and implementation of this agreement.

2. A Post-Baccalaureate Certificate in Global Health Innovation

- 2.1. Under this Agreement, participating students will be awarded a PBC in Global Health Innovation granted by the University of Maryland, Baltimore for successfully completing the curriculum approved by the Maryland Higher Education Commission and the Board of Regents.
- 2.2. The PBC program will take place in Costa Rica in conjunction with CISG, an educational organization with experiencing facilitating interdisciplinary immersion experiences focused on concepts of global health, innovation, complexity science, social determinants of health, health care disparities, community engagement, and product development.
- 2.3. The PBC will be an in-person course with didactic and experiential components. CISG faculty who have been appointed as adjunct faculty at UMGS will deliver the courses in Costa Rica. The courses in the PBC are:
 - INNO 801: Intercultural Communication and Conflict Resolution (1 credit)
 - INNO 802: Global Health and Social Innovation (2 credits)
 - INNO 803: Health Systems: Innovations for Universal Health Care (2 credits)
 - INNO 804: Urban Health and Social Innovation Lab (2 credits)
 - INNO 805: Global Health and Social Innovation Practicum (5 credits)

The curriculum may be altered over time in accordance with UMGS policies and procedures. Students must earn a 3.0 grade point average or greater as a requirement for graduation.

The course descriptions can be found in Appendix A.

- 2.4. UMGS will be responsible for informing students what travel documents and immunizations are required prior to travel.
- 2.5. CISG will facilitate the logistics of students during the Costa Rica experience, including safety and security measures; clean, safe, hospitable housing; in-country transportation; translation services, when needed; potable drinking water or means of purification; and meals as applicable.
- 2.6. CISG will compensate its employees who have received adjunct faculty appointments from UMGS to carry out the PBC.

- 2.7. UMGS will facilitate health care and emergency support should it be needed through the University's Global Medical and Security Assistance program. Students will be responsible for the cost of any health or emergency care or support. Travel arrangements and the cost to and from Costa Rica will be paid for by the students in consultation with the Global Health Innovation program director.
- 2.8. UMGS students will be required to secure travel insurance prior to participation in the PBC in Global Health Innovation..
- 2.9. UMGS will appoint a program director to oversee the curriculum and quality of instruction of the PBC in Global Health Innovation program and to monitor the safety of the student experience. At the commencement of the Agreement, Virginia Rowthorn, J.D., LL.M. will serve in the role of Program Director.
 - 2.9.1. The program director will constitute and chair a Collaborative Academic Administrative Committee between UMGS and CISG to develop and to manage all administrative aspects of the PBC and to oversee the academic aspects of the program, including the activities related to assessment and student progression issues. The Academic Administrative Committee will have representation from UMGS and CISG to facilitate the delivery of the innovation track. The academic administrative committee will be composed of the following positions:
 - UMGS Program Director of the Global Health Innovation PBC
 - UMGS Senior Associate Dean
 - UMGS Assistant Dean
 - UMGS Program Director for the M.S. in Health and Social Innovation
 - UMGS Assistant Vice President of Administration and Finance
 -
 - UMGS Faculty Member
 - CISG Executive Director
 - CISG Senior Administrator
 - 2.9.2. The UMGS program director will be responsible for the development, coordination, maintenance of quality assurance, and student advisement. This responsibility will be discharged in accordance with UMGS policies and procedures with input from CISG where required.
- 2.10. CISG members who will be instructing students will be appointed to the UMGS faculty in the rank of adjunct professor. All CISG faculty members will be fluent in written and spoken English. UMGS will ensure that faculty appointed in Costa Rica

hold appropriate credentials and undergo background checks in accordance with UMGS policy.

3. Tuition and Fees

- 3.1. All tuition and fees chargeable in respect to the PBC in Global Health Innovation program will be agreed upon and recommended by the UMGS/CISG Collaborative Academic Administrative Committee, normally no later than December of the year immediately prior to intake. Both UMGS and CISG will provide detailed budgets of expected expenses for review by the Collaborative Academic Administrative Committee and the Dean of the Graduate School.
- 3.2. UMGS will collect tuition and fees from each student according to UMGS policy and procedure. Following receipt of tuition and fees, UMGS will disperse agreed upon revenue to CISG for in-country logistics and instruction, and the UMGS will retain revenue for management, administrative, and faculty costs. All payments will be made by UMGS to CISG no later than 6 weeks following each enrollment of students.
- 3.3. UMGS and CISG agree that the minimum number of students per intake year will be no fewer than 10, and that tuition and fees will be assessed to each individual student.. There is no financial obligation between UMGS and CISG given a failure to intake no fewer than 10 students.
- 3.4. All payments and fees due will be made in U.S. dollars.

4. Student Recruitment and Admissions

- 4.1. UMGS and CISG must agree each year to the minimum and maximum number of students for each year's annual intake, which will normally be agreed to no later than March 1st in the semester immediately prior to intake. The Collaborative Academic Administrative Committee will be required to approve commencement of the program in consideration of recruitment figures, and the approval of the Dean of the UMGS.
- 4.2. All recruitment activity, publicity and marketing of the track may be undertaken by UMGS. UMGS will be responsible for setting up and maintaining any website(s) established for marketing purposes.
- 4.3. Publicity and materials provided to prospective applicants will contain full details of the track, requirements for entry and program tuition and fees. The Collaborative Academic Administrative Committee will be responsible for ensuring accuracy in marketing, publicity, and other related promotional material related to the track.
- 4.4. Applications for admission will be processed by UMGS according to UMB policy and procedure.

- 4.5. All offers of admission will be made by UMGS in compliance with the entry requirements agreed upon by the Collaborative Academic Administrative Committee.
- 4.6. As part of the formal offer of admission, applicants will be informed of the arrangements relating to matriculation and payment of fees.
- 4.7. UMGS will be responsible for providing information or make available to students the following matters upon being admitted into the program:
 - Administration of the program;
 - Aims and objectives of the program;
 - Methods of assessment;
 - Feedback and evaluation;
 - Matriculation;
 - Payment of tuition and fees;
 - Graduation arrangements;
 - UMGS' and CISG's Codes of Discipline and potential sanctions for disciplinary violations;
 - Grievance procedures;
 - Academic appeals procedures;
 - UMB safety and security guidelines including registration into UMB's Global Medical and Security Assistance program; and
 - Other appropriate regulations, policies and procedures

5. Student Matriculation and Registration

- 5.1. Students will be registered/matriculated by UMGS.
- 5.2. UMGS will be responsible for creating and maintaining detailed student records in accordance with its normal procedures and will agree to reasonably share this information with CISG upon request. It is the student's responsibility to execute a FERPA release to permit both programs to monitor any matter of legitimate educational interest to the participating programs.
- 5.3. Students will be required to notify UMGS of withdrawal from the program and/or any changes in the details supplied by them at registration/matriculation. UMGS will be responsible for reporting all such changes to CISG. In turn, CISG will report to UMGS any such changes which are reported directly to it.

6. Assessment and Examination

- 6.1. The Collaborative Academic Administrative Committee will oversee all assessment, examination, and progression issues related to students studying in the program.
- 6.2. All examinations, summative assessments and grading processes will be agreed upon by the Collaborative Academic Administration Committee.

6.3. CISG will be responsible for the transfer of all assessment grades and examination results to UMGS.

6.4. The Collaborative Academic Administration Committee will establish a mechanism whereby students' progress may be monitored and remedial action taken where appropriate.

7. Graduation

7.1. UMGS will oversee all arrangements for graduation ceremonies in accordance with its established processes and procedures. Students will be invited by UMGS to attend the appropriate graduation ceremony which will be organized in accordance with the customs, practice, and academic dress of the institution.

7.2. UMGS will be responsible for the conferment of the award as appropriate and for the production of the degree parchment for a student attaining the necessary credits for the award. Degree parchments will be in the format of UMGS and will make reference to the joint nature of the program.

7.3. UMGS will provide all graduates with a transcript of grades at the fee normally charged for this service.

8. Student Discipline, Appeals and Grievances

8.1. CISG will refer discipline cases of an academic nature, for example concerning program work or examinations, to UMGS, which will process each case in accordance with its own policies and procedures. UMGS will reasonably share information relating to the outcome of any discipline hearing(s) and any decisions taken therein to CISG.

8.2. When an alleged offence of a non-academic nature is committed by a student under CISG supervision, the code of discipline of CISG will normally apply. In such cases, there will be consultation between the institutions to ensure a consistent approach to discipline offences wherever possible. Students may appeal CISG discipline to the program director.

8.3. A student who wishes to file a grievance regarding general aspects of the program will do so in accordance with complaints procedure of the UMGS, and all complaints will be reviewed, assessed and acted upon with recommendation from the collaborative academic administrative committee.

9. Data Sharing and Data Protection

9.1. Both institutions will ensure that, where data is obtained from registered and prospective students, prior FERPA consent is obtained and that those students understand that this data may be shared amongst UMGS and CISG once collected.

- 9.2. Each institution ensures that it will have in place technical and organizational security measures to protect relevant data from unauthorised or unlawful processing and accidental loss or damage.

10. Termination of Agreement

- 10.1. This Agreement may only be terminated by the mutual consent of UMGS and CISG, or by one institution giving no less than 6 months written notice in advance to the other institution
- 10.2. In the event of early termination of this Agreement at the instigation of any of the Institutions, adequate arrangements must be in place to support registered students who wish to continue their studies under the Program/Discipline without any detriment or disadvantage. These arrangements should be detailed in a formal letter between the institutions.

11. Miscellaneous

- 11.1. Neither party shall be responsible for any failure to perform or delay in performing any of its obligations under this Agreement where and to the extent that such failure nor does delay result from causes outside the reasonable control of the party. Such causes shall include, without limitation, Acts of God or of the public enemy, acts of the government in its sovereign or contractual capacity, fires, floods, epidemics, quarantine restrictions, freight embargoes, civil commotion, or the like. Notwithstanding the above, strikes and labour disputes shall not constitute an excusable delay for either party under this Agreement. The Agreement may be terminated without penalty by the part whose performance has not been affected if non-performance continues for more than thirty (30) days.
- 11.2. Headings used in this Agreement are for reference purposes only and shall not be used to modify the meaning of the terms and conditions of this Agreement. This Agreement may be executed in two or more counterparts each of which shall be deemed an original, but all of which together shall constitute one and the same instrument.
- 11.3. If any provision contained in this Agreement is held invalid, illegal, or unenforceable, then this Agreement will be construed as if such provision had never been contained herein.
- 11.4. The parties will comply with all applicable laws, ordinances, rules and regulations governing their respective duties or responsibilities under this Agreement
- 11.5. This Agreement shall be only for the benefit of the undersigned parties and their permitted successors and assigns, and no student or other person shall be deemed to be a third party beneficiary of this Agreement.

- 11.6. The Parties agree that no Student shall be discriminated against unlawfully on the basis of age, race, color, creed, sex, sexual orientation, gender identity or expression, religion, national origin and disability.
- 11.7. This Agreement shall be governed by and construed in accordance with the laws of the State of Maryland, without reference to its principles of conflicts of laws.
- 11.8. This Agreement, together with all exhibits attached hereto, represents the entire agreement and understand between the parties with respect to the subject matter hereof, and supersedes any other agreement or understanding, written or oral, that the parties hereto may have had with respect thereof. No statements, representations, promises or inducements with respect to the subject matter by either party or by any agent or representative of either party which is not contained in this Agreement shall be valid or binding between the parties.

12. Acknowledgement of Agreement

Bruce E. Jarrell, MD
Executive Vice President and Provost
Dean, University of Maryland Graduate School

Date

Jay A. Perman, MD
President
University of Maryland, Baltimore

Date

Carlos Faerron, MD
Executive Director
Inter-American Center for Global Health

Date

APPENDIX C: 2.5 YEAR PLAN OF STUDY

AOC/PBC	Implementation and Dissemination Science		Global Health Monitoring and Evaluation		Global Health Innovation	
Year 1	Course	Credits	Course	Credits	Course	Credits
Fall A	MHS 600: Introduction to Scholarly Writing and Library Resources	1	MHS 600: Introduction to Scholarly Writing and Library Resources	1	MHS 600: Introduction to Scholarly Writing and Library Resources	1
Fall A	MHS 605 Perspectives on Global Health	3	MHS 605 Perspectives on Global Health	3	MHS 605 Perspectives on Global Health	3
Fall B	ETHC 638 Issues in International Research Ethics	3	ETHC 638 Issues in International Research Ethics	3	ETHC 638 Issues in International Research Ethics	3
Spring A	CIPP 960 Critical Issues in Global Women's and Children's Health	3	CIPP 960 Critical Issues in Global Women's and Children's Health	3	CIPP 960 Critical Issues in Global Women's and Children's Health	3
Spring B	GH 652 Global Health Management and Leadership	3	GH 652 Global Health Management and Leadership	3	GH 652 Global Health Management and Leadership	3
	Subtotal	<u>13</u>	Subtotal	<u>13</u>	Subtotal	<u>13</u>

Year 2						
Fall A	MHS 613 Research Implementation and Dissemination 1	3	GH 607 Global Health Monitoring and Evaluation I	3	INNO 601 Intercultural Communication and Conflict Resolution	1
					INNO 602 Global Health and Social Innovation	2
					INNO 603 Health Systems: Innovations for Universal Health Care	2
					INNO 604 Urban Health and Social Innovation Lab	2
					INNO 605 Global Health and Social Innovation Practicum	5
Fall B	MHS 631 Global Non-Communicable Disease Epidemiology	3	MHS 610 National/International Approaches to Healthcare Delivery	3	MHS 608 Research Seminar I*	3
Spring A	MHS 630 Essentials of Chronic and Infectious Disease Epidemiology (15-week course)	3	GH 612 Global Health Monitoring and Evaluation I	3		
Spring B	MHS 614 Research Implementation and Dissemination II	3	GH 620 Global Disease Control	3	GH 700 Capstone Project	3
	Subtotal	<u>12</u>	Subtotal	<u>12</u>	Subtotal	<u>12</u>

Year 3						
Fall A	MHS 608 Research Seminar I	3	MHS 608 Research Seminar I	3		
Fall B	GH 700 Capstone Project	3	GH 700 Capstone Project	3		
	Subtotal	<u>6</u>	Subtotal	<u>6</u>	Subtotal	<u>6</u>
	Total Credits	<u><u>31</u></u>	Total Credits	<u><u>31</u></u>	Total Credits	<u><u>31</u></u>



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

TOPIC: University of Maryland, Baltimore:
Master of Science in Vulnerability and Violence Reduction

COMMITTEE: Education Policy and Student Life

DATE OF COMMITTEE MEETING: Tuesday, May 5, 2020

SUMMARY: The Master of Science (M.S.) in Vulnerability and Violence Reduction program will be the first of its kind in the United States. The program will prepare students from diverse personal and professional backgrounds to organize, lead, and support effective violence and vulnerability reduction initiatives in their own communities. The program is designed for individuals interested in working in urban communities with vulnerable populations heavily impacted by poverty, social isolation, conflict, violence, and trauma. The degree provides students with the education and concrete training needed to engage with and respond to civic, social, environmental and economic challenges related to violence and conflict at the local, national and global levels. The curriculum of the proposed MS will comprise 30 credits delivered in a hybrid format of three in-person credit hours and twenty-seven online credit hours.

The proposed program will be developed and taught by full-time Graduate School faculty, along with adjunct faculty from Factor-Inwentash Faculty of Social Work at the University of Toronto and the Centre for Trust, Peace & Social Relations at Coventry University in England. These faculty members, who are world-recognized experts in violence-studies, will receive Graduate School faculty appointments to deliver courses within the proposed curriculum.

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 fees revenue.

CHANCELLOR'S RECOMMENDATION: That the Committee on Education Policy and Student Life recommend that the Board of Regents approve the proposals from University of Baltimore to offer the Bachelor of Science in Accounting.

COMMITTEE RECOMMENDATION:	DATE: May 5, 2020
BOARD ACTION:	DATE:
SUBMITTED BY: Joann A. Boughman	301-445-1992 jboughman@usmd.edu



Dr. Roger J. Ward, JD, MSL, MPA
Interim Provost and Executive Vice President
Dean, Graduate School

Office of Academic Affairs/Graduate School
220 Arch Street, Room 03-118
Baltimore, MD 21201
410 706 2477
rward@umaryland.edu

www.umaryland.edu

April 7, 2020

Jay A. Perman, MD
Chancellor
University System of Maryland
3300 Metzert Rd.
Adelphi, MD 20783

Dear Chancellor Perman:

The University of Maryland Graduate School is seeking authorization to offer a Master of Science (M.S.) in Vulnerability and Violence Reduction program.

The program, the first of its kind in the United States, will prepare students from diverse personal and professional backgrounds to organize, lead, and support effective violence and vulnerability reduction initiatives in their own communities. The degree provides students with the education and concrete training needed to engage with and respond to civic, social, environmental and economic challenges related to violence and conflict at the local, national and global levels.

The proposed program will be developed and taught by full-time Graduate School faculty, along with adjunct faculty from Factor-Inwentash Faculty of Social Work at the University of Toronto and the Centre for Trust, Peace & Social Relations at Coventry University in England. These faculty members, who are world-recognized experts in violence-studies, will receive Graduate School faculty appointments to deliver courses within the proposed curriculum.

We hope that you will share our enthusiasm for this innovative academic program. Please contact should you wish to discuss.

The University also is submitting a proposal to MHEC at this time, as well.

Please contact me if you need further information.

Thank you.

Sincerely,

A handwritten signature in black ink, appearing to read "Roger J. Ward".

Dr. Roger J. Ward, JD, MSL, MPA
Interim Provost and Executive Vice President
Dean, Graduate School

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

University of Maryland, Baltimore

Institution Submitting Proposal

Master of Science in Vulnerability and Violence Reduction

Title of Proposed Program

Master of Science

Award to be Offered

Fall 2020

Projected Implementation Date

Proposed HEGIS Code

30.2301

Proposed CIP Code

University of Maryland Graduate School

Department in which program will be located

Dr. Flavius Lilly

Senior Associate Dean

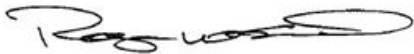
Department Contact

(410) 706-7767

Contact Phone Number

flilly@umaryland.edu

Contact E-Mail Address



Signature of President or Designee

April 7, 2020

Date

UNIVERSITY OF MARYLAND, BALTIMORE (UMB) GRADUATE SCHOOL

Proposal for Master of Science in Vulnerability and Violence Reduction

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A. Centrality to Institutional Mission and Planning Priorities:

1. Program description and alignment with mission

The University of Maryland Graduate School (UMBGS) is pleased to submit a proposal to create a new Master of Science (MS) in Vulnerability and Violence Reduction. The curriculum of the proposed MS will comprise 30 credits delivered in a hybrid format of 4 in-person credit hours and 26 online credit hours. A Post-Baccalaureate Certificate (PBC) in Vulnerability and Violence Reduction program will be offered within the MS degree program. A proposal for the PBC program has been submitted concurrently to MHEC for review. The proposed PBC will comprise 16 credits delivered entirely online. For the proposed MS, the learning experience will involve a combination of an in-person launch seminar, online lectures, interactive case studies, a research-based capstone project, and a culminating in-person workshop to share research and develop implementation plans. For the PBC, the learning experience will consist of online lectures, planned synchronous online “live events”, and interactive case studies.

The proposed MS degree will be comprised primarily of new courses (27 credits) with one 3 credit existing course.

With this degree program, we intend to create an opportunity for students to explore critical approaches to the understanding of vulnerability and risk within communities challenged by violence. The degree program will also allow students to understand how the exposure and exploitation of vulnerabilities can lead to violence. The proposed MS and PBC respond to a serious gap in the understanding of violence. While individual academic fields, such as public health and criminology, have studied violence extensively, there is little cross-disciplinary research and understanding of why communities fail to remain peaceful given that violent conflict is not normal or necessary.

Violence and vulnerability is seldom researched or taught from a multidisciplinary lens, which is critical to developing solutions. In addition to the multidisciplinary lens, it is critical to study violence and solutions from a comparative perspective to appreciate the impact of multiple determinants on the evolution of violence and an expanded range of solutions to address violence. These proposed degree programs will provide students with a framework to understand the factors that lead to violence, the role of power and structure, the importance of place and population, and different approaches that have been used to address violence using case studies. Students will use this basis to develop interdisciplinary and innovative strategies to address violence in their communities.

The proposed degree programs will be developed and taught by full-time UMBGS faculty, along with adjunct faculty from Factor-Inwentash Faculty of Social Work at the University of Toronto and the Centre for Trust, Peace & Social Relations at Coventry University in England. These faculty members, who are world-recognized experts in violence-studies, will receive faculty appointments from UMBGS to deliver courses within the proposed curriculum for the proposed MS and PBC.

The MS Capstone will give students an opportunity to become involved in innovative research with, and for, vulnerable populations heavily impacted by poverty, social isolation, conflict, violence, and trauma. The MS Capstone will give students the unique opportunity to select among, and work with, the program’s international faculty members throughout the final year of the MS Program, with the option of an in-residence Capstone experience in Baltimore, Toronto, or Coventry, UK (in consultation and at the discretion of the selected faculty member).

The proposed MS and PBC are designed for individuals interested in working in urban communities with vulnerable populations heavily impacted by poverty, social isolation, conflict, violence, and trauma. The degree provides students with the education and concrete training needed to engage with and respond to civic, social, environmental and economic challenges related to violence and conflict at the local, national, and global levels.

UMB's mission is to improve the human condition, and we have long been engaged in global health and education to further this cause. Last year, more than 700 students, faculty, and staff made 1,537 visits to 62 countries. They worked on global projects with impact including vital initiatives of health, well-being, and justice. This international comparative proposed degree on vulnerability and violence reduction is designed to improve communities and clearly in line with UMB's mission.

2. Alignment with institutional strategic goals

The proposed MS in Vulnerability and Violence Reduction is fully consistent with the mission of the UMBGS and the University of Maryland, Baltimore. In particular, this proposal aligns strongly with two of UMB's strategic objectives on "health, justice, and social impact" and "student success." Additionally, the certificate programs contribute to the fulfillment of related strategic goals for UMB, in a number of significant ways:

- One of the university's key strategic themes is to "excel at interdisciplinary research and interprofessional education, clinical care and practice, and public service". This master's degree directly responds to this theme by developing areas of learning which are focused on interdisciplinary research and interprofessional education.
- The university has recognized the important role the Graduate School plays in creating accessible education for individuals already engaged in their professions. The proposed degrees will appeal to practitioners and students interested in a range of professions including policing, community organizing, education, social work, and individuals working with vulnerable adults and young people.

3. Program Funding

No new general funds will be required for implementation of the proposed MS and PBC which will be coordinated and administered fully through the Graduate School.

4. Institutional Commitment

UMB is committed to ongoing administrative, financial, and technical support of the proposed program which will be incorporated into the existing global health programming in the UMB Graduate School. In the unexpected case that the program has to be discontinued, UMB will continue the program for a period of time sufficient to allow enrolled students to complete the program.

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

Secretary of Education, Dr. James Fielder in his opening letter in the 2017-2021 Maryland State Plan explains that Maryland's students are "entering an economy that is challenging, innovative, global, and diverse." The Secretary's sentiments are reflected in a growing interest in global and comparative education in all areas. Students at all levels – sometimes as early as high school – are participating in projects and programs outside of their home countries. The best of these programs helps students use the transformative experience of international immersion to approach domestic social challenges with new ideas and enhanced problem-solving skills. These skills earned by Maryland students will

undoubtedly benefit the state. More American students are entering undergraduate, graduate, professional school, and even residency programs having amassed international experiences and are seeking advanced training in the international arena.

The 2017-2021 Maryland State Plan articulates three primary goals for postsecondary education: access (ensure equitable access to affordable and quality postsecondary education all Maryland residents); success (promote and implement practices and policies that will ensure student success); and innovation (foster innovation in all aspects of Maryland higher education to improve access and student success). The proposed M.S. in Global Health aligns well with the State Plan.

The proposed degree is highly innovative as it combines a focus on vulnerability and violence reduction (instead of just one) and additionally, include faculty from three countries to provide a needed comparative perspective. Violence affects a significant proportion of the population but it manifests differently in different settings. It threatens the lives and physical and mental health of millions of people, overburdens health systems, undermines human capital formation, and slows economic and social development, and Maryland is no stranger to this phenomenon. Violence is predictable and therefore preventable. The World Health Organization (WHO) has acknowledged that there are identified strategies for evidence-based interventions to prevent interpersonal and self-directed violence: developing safe, stable, and nurturing relationships between children and their parents and caregivers; developing life skills in children and adolescents; reducing availability and harmful use of alcohol; reducing access to guns, knives and pesticides; promoting gender equality; changing cultural norms that support violence; and ensuring victim identification, care, and support. Most vulnerability and violence prevention programs have yet to be systematically implemented and monitored for their impact. The proposed degree will provide students with a unique international and comparative prevention focus to improve implementation success.

Relative to "Access," placing the bulk of the program online offers non-traditional students a pathway to earning their M.S. in Global Health in a format that allows them to balance their educational objectives with competing demands of family and work. Finally, regarding "Success," programs such as UMB's M.S. in Global Health are expected to attract students from diverse backgrounds originating both locally and internationally. UMB has a full-service student support model to ensure early identification of students who may be struggling academically and to intervene to improve the likelihood of graduate school completion.

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

The MS and PBC in Vulnerability and Violence Reduction will prepare students from diverse personal and professional backgrounds to organize, lead, and support effective violence and vulnerability reduction initiatives in their own communities. Depending on their individual academic profile, students will have a wide range of career options in agencies and programs providing support to vulnerable communities across the state and country and beyond.

To meet the high demands of employers searching for candidates that have the skills needed to reduce vulnerability and violence in communities, we have strategically aligned our courses to coincide with the current needs. Students will examine vulnerability and violence from various levels and analyze the root causes, learn practices to reduce violence and improve patterns of interaction. Thus, our graduates will be well-prepared for professional success in a number of fields that may include:

- **Non-profit Organizations**, examples include Women Against Violence, youth violence prevention organizations, the National Center for Prevention of Community Violence,

National Center on Domestic and Sexual Violence, and Cure Violence.

- **Human Rights and Humanitarian Relief** in organizations like the Red Cross, Amnesty International, Oxfam International, and Cooperative Assistance and Relief Everywhere (CARE).
- **Research** in organizations like the Brookings Institution, USIP, RAND Corporation, Futures Without Violence, American Institutes for Research,
- **Multi-lateral Agencies** like the United Nations, International Monetary Fund, World Bank, World Health Organization
- **Educational Institutions** like public schools, universities, Integral Peacemaker Institute
- **Security and Intelligence Agencies** like local police forces, FBI, USAID, Department of State, Department of Defense, and the prison systems.

We conducted a national and regional market assessment of the number of jobs available in which violence prevention and conflict resolution was described in the job duties. According to Indeed.com (Data collected November 18, 2019) there were 2,989 vacancies in Maryland, 5,845 vacancies in Pennsylvania, 4,277 vacancies in Virginia, 4,335 in Washington D.C., and 142,303 vacancies nationally. The job titles that were common in these vacancy postings include:

- Police Officer
- Security Officer
- Youth Development Associate
- Foreign Affairs Officer
- Project Associate in Conflict Management
- Communications Manager
- Public Information Officer
- Prevention Specialist / Manager
- Program Manager
- Community Health Educator
- Victims Advocate
- Case Manager
- International Development Officer
- Clinical Counselor / Psychologist
- Executive Director
- Special Agent in the FBI
- Violence Prevention Educator

D. Reasonableness of Program Duplication

To our knowledge, there are no other institutions in Maryland with a degree program similar to the proposed MS and PBC in Violence and Vulnerability Reduction.

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

This MS and PBC in Vulnerability and Violence Reduction does not have relevance to the uniqueness and/or institutional identities and missions of HBIs.

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

This MS and PBC in Vulnerability and Violence Reduction does not have relevance to the uniqueness and/or institutional identities and missions of HBIs.

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

1. Provide a list of courses with title, semester credit hours and course descriptions. Courses that are online are designated with an asterisk.

The proposed MS in Vulnerability and Violence Reduction includes the following courses which are all required to obtain the MS:

- VVR 601 In-person Launch Seminar (2 credit)
- VVR 602 The Nature of Violence: Theory and Practice (4 credits)*
- VVR 603 Vulnerability and Violence: Theory and Practice (4 credits)*
- VVR 604 Violence Prevention and Interventions: Theory and Practice (4 credits)*
- VVR 605 Sustaining Non-Violence: Theory and Practice (4 credits)*
- VVR 606 Research and Implementation Practicum (3 credits)*
- VVR 607 MS Capstone (4 credits)*
- VVR 608 In-person Culminating Seminar (2 credits)
- INNO 650 Community Engagement & Partnerships (3 credits)

The proposed 16 credit PBC in Vulnerability and Violence Reduction will allow students to obtain a certificate for taking three courses from the following menu, depending on their particular interests:

- VVR 602 The Nature of Violence: Theory and Practice (4 credits)*
- VVR 603 Vulnerability and Violence: Theory and Practice (4 credits)*
- VVR 604 Violence Prevention and Interventions: Theory and Practice (4 credits)*
- VVR 605 Sustaining Non-Violence: Theory and Practice (4 credits)*

Course Descriptions

VVR 601: Launch Seminar (2 credit) | new course
Flavius Lilly, PhD, MPH, MA and Virginia Rowthorn, JD, LLM

This in-person launch seminar will take place at UMBGS in Baltimore. It will be an intensive seminar in concepts of vulnerability and violence with program faculty and an opportunity for students entering the MS program to meet and share their backgrounds and goals. The seminar will consist of lectures, interactive case studies, and site visits. The purpose of the in-person launch seminar is to bring students together as a cohort that moves through the program together to form a network of international collaborators sharing best practices and innovative solutions to violence reduction.

VVR 602: The Nature of Violence: Theory and Practice (4 credits)* | new course
David McIlhatton, PhD and Mike Hardy, PhD

This course is designed to provide students with a strong theoretical understanding of the enablers, inhibitors, dynamics, and drivers of violence at the individual, community and city levels. It will draw on significant research in different contexts including: the United Kingdom, Latin America, United States, Canada, and SE Asia. This research will prepare the student to understand how the enablers and inhibitors of violence can be geographically restricted, but also how they transcend international boundaries as a result of organized crime, terrorism,

and gangs. It will also draw on significant research and responses by the professional community (e.g. local and national government, third sector, education, and public health) to best counter and mitigate the impacts of violence. The applied portion of this new course will include specific case studies examining the entire lifecycle of violence, including the unintended consequences of both violent acts and responses.

VVR 603: Vulnerability and Violence: Theory and Practice (4 credits)* | new course

Tanya L. Sharpe, MSW, PhD

This course is designed to provide students with advanced learning opportunities intended to increase students' knowledge of how to apply different theories and intervention strategies to the assessment and response to experiencing homicide, state sanctioned and structural violence for diverse marginalized global communities. Using ecological, social justice, trauma and coping theories, this course will prepare students to: identify and critically examine the root causes and psychosocial consequences of experiencing chronic homicide, state sanctioned and structural violence; understand their intersectional and traumatic impact on communities; and explore culturally responsive intervention methods for helping communities cope and thrive after experiencing such tragedy. In addition, the impact of working with communities exposed to violent traumatic events for the researcher/ provider will be explored with recommendations for self-care.

The applied portion of the course uses specific case studies to demonstrate the student's ability to apply theory to practice through the development and application of culturally responsive intervention approaches to program development and practice.

VVR 604: Violence Prevention and Interventions: Theory and Practice (4 credits)* | new course

Lori Edwards, DrPH, MPH, BSN, RN, CNS-PCH, BC

This course examines violence using a public health framework focused on prevention and interventions on a societal level. The course prepares interprofessional learners to identify risks for violence across the lifespan and its impact on individuals, families, systems, communities, and society, globally. Intentional and unintentional injuries, destruction, economic devastation, and trauma are a few of the burdens of violence on society. Violence can be prevented when interventions use a public health approach: assessing the problem, identifying causes and risks, and developing effective, scalable interventions. Using social justice theories, the WHO social determinants of health framework, the Sustainable Development Goals, and the social ecological model, the course will unravel root causes of structural violence in order to develop interventions that impact upstream factors. The three levels of prevention, primary, secondary, and tertiary, will outline approaches that prevent, evaluate, and mitigate consequences of violence. The course will explore scientific interventions that change the trajectory of violence. Public health policy, enforcement, advocacy, education or practice based innovations will be highlighted. Programs such as Mental Health First aid, RAPID model, Violence Intervention Programs, mobile health technology, community intervention resources, system responses, and the WHO Global Campaign for Violence Prevention will be presented as examples of evidence based injury control and violence reduction resources that may be applied globally.

VVR 605: Sustaining Non-Violence: Theory and Practice (4 credits)* | new course

Toby Treem Guerin, JD

This course focuses on the philosophies, policies, and processes necessary for communities, 10

organizations, and societies to manage conflict and sustain peace. Effective conflict management is an essential skill for any leader. Using the foundation of restorative justice and conflict management theory, the course explores a variety of the methods used to break the cycle of conflict. Students begin by critically exploring the spectrum of dispute resolution processes used in civil, criminal, and public policy contexts in the United States and internationally. Once students have a more comprehensive understanding of conflict management and relationship building, they will examine their own relationship with conflict and its impact on their own leadership skills.

The applied portion of the course uses specific case studies to demonstrate both successful and unsuccessful conflict resolution interventions. Students will engage in a series of skill-building exercises to increase their individual capacity to mediate conflict and use the skills in simulated settings. The course culminates with students applying the new skills and processes to a relevant situation in their own life, community, or organization.

VVR 606: Research and Implementation Practicum (3 credits)* | new course
Tanya L. Sharpe, MSW, PhD

Students gain a deeper understanding of violence and its impact on vulnerable populations through the application of theories and culturally responsive approaches to practice. This research and implementation practicum emphasizes interdisciplinary, intercultural, interpersonal communication and training by building upon student's critical knowledge, theories and skills learned in VVR 601-605. The practicum is designed to teach students how to apply their knowledge and skills to real world community based research projects. Based on student interest and skill level, students will be matched with a course instructor and serve on their research team to learn about applied research methods. Students will learn how to; design and implement programs with and for communities impacted by violence; develop and implement evaluation tools, understand, and complete research tasks such as conducting literature searches, entering and coding data, and assisting with data collection. Students are required to attend lab/center meetings. Tasks vary throughout the semester and across labs/centers.

VVR 607: MS Capstone (4 credits)* | new course
Flavius Lilly, PhD, MPH, MA and Virginia Rowthorn, JD, LLM

The capstone is designed to be a supervised learning experience and a demonstration of the substantive application of the knowledge and skills that have been acquired in the courses taken as part of the MS in Vulnerability and Violence Prevention. The capstone functions as both the practice experience and the culminating experience for the program. The MS in Vulnerability and Violence Prevention capstone experience includes the following components: development of a capstone proposal; delivery of an oral presentation via live video feed, and at the field placement site as appropriate; and preparation of a capstone portfolio.

VVR 608: Culminating Seminar (2 credits) | new course
Flavius Lilly, PhD, MPH, MA and Virginia Rowthorn, JD, LLM

The Culminating Seminar will take place at Coventry University and provide an opportunity for students to work with program faculty to prepare a public presentation of their research and Capstone projects and receive feedback from a curated panel of experts. Following multiple rounds of feedback, students will present their research and Capstone projects at the public RISING Global Forum in Coventry.

INNO 650: Community Engagement and Partnerships (3 credits) | existing course

Jim Kucher, PhD

This course is designed to help students gain insights into economic and social value creation. Specifically, the purpose of this course is to provide students with hands-on exposure to the entrepreneurial pursuit of social and health impact and innovation. Students will learn to recognize and critically assess various forms of social and health enterprise strategies as tools of economic development and social transformation. Students will gain a greater understanding of the challenges of growing and sustaining a social or health enterprise.

2. Describe the educational objectives and intended student learning outcomes

With this degree program, we intend to create an opportunity for students to explore and analyze principles of vulnerability, violence, risk, and community safety in order to solve complex health and social challenges.

Upon completion of the PBC in Violence and Vulnerability Reduction, the student will be able to:

- Explain the importance of injury and/or violence as a major public health problem.
- Discuss some of the root causes of many types of violence and aggression.
- Analyze injury and/or violence data.
- Strategize prevention strategies based on theories related to the cause of violence and aggression.
- Develop a plan to stimulate change for injury and/or violence prevention through policy, enforcement, advocacy, and/or education.
- Disseminate information on injury and/or violence prevention to the community, policymakers, leaders, and other key stakeholders, through diverse communication networks.

Upon completion of the MS in Violence and Vulnerability Reduction, the student will be able to:

- Explain some of the root causes of many types of vulnerability, aggression, and violence.
- Evaluate the multiple theories of vulnerability in relation to specific cultural communities/contexts.
- Apply reflection to evaluate and explain violent behavior.
- Analyze variations in violent crime using relevant research findings.
- Develop prevention strategies using theories related to causation of violence and aggression.
- Evaluate developments and dominant paradigms in contemporary crime control and community safety.
- Develop specific area of expertise within the field of crime control and community safety using self-reflection and critical analysis.
- Analyze the efficacy of policy and practice aimed at crime control and community safety using relevant research findings.
- Develop advanced knowledge of 'best practices' in relation to crime control and community safety.
- Describe the types of childhood experiences associated with vulnerability, trauma,

and the risk of offending.

- Discuss the social environmental factors affecting vulnerability and risk.
- Evaluate the evidence on what works in early intervention.
- Analyze early intervention and public protection policies drawing on theory and research on risk.
- Critique examples of empirical research in criminology and criminal justice.
- Demonstrate broad knowledge of research concepts, terminology and methods; and an enhanced knowledge of the methodological literature.
- Apply criminological research methodologies to their own research practice.
- Apply ethical principles and methodologies within social-behavioral and / or community-based research.

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

Not applicable.

4. *Identify any specialized accreditation or graduate certification requirements*

Not applicable.

5. *If contracting with another institution, provide a copy of the contract*

Not applicable.

H. Adequacy of Articulation

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

No articulation agreements are required for the MS or PBC.

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

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

A summary list of faculty can be found in Appendix A.

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

- Pedagogy that meets the needs of the students*
- The learning management system*
- Evidenced-based best practices for distance education, if distance education is offered.*

UMB is committed to providing the best teaching and learning possible and to excellence in all of its courses.

Table. 1 Faculty Resources Available

Course Title	Faculty (*full-time faculty; †Adjunct faculty)
VVR 601 Launch Seminar (2 credits)	Flavius Lilly* and Virginia Rowthorn*
VVR 602 The Nature of Violence: Theory and Practice (4 credits)	David McIlhatton† and Mike Hardy†
VVR 603 Vulnerability and Violence: Theory and Practice (4 credits)	Tanya Sharpe†
VVR 604 Violence Prevention and Interventions (4 credits)	Lori Edwards*
VVR 605 Sustaining Non-Violence: Theory and Practice (4 credits)	Toby Guerin*
INNO 650 Community Engagement and Partnerships (3 credits)	Jim Kucher*
VVR 610 Research Practicum (3 credits)	Tanya Sharpe†
VVR 611 MS Capstone (4 credits)	Flavius Lilly* and Virginia Rowthorn*
VVR 612 Culminating Seminar (2 credits)	Flavius Lilly* and Virginia Rowthorn*

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.

The University of Maryland, Baltimore's Health Sciences and Humans Services Library (HS/HSL) collection contains more than 30,000 electronic journals, 162 current print journals, approximately 170,000 books, and 6,000 electronic books. Students can access the electronic resources offered on the library web site by logging in with their University ID number. The library serves as the regional medical library for ten southeastern states as part of the national Library of Medicines National network of Libraries of medicine. In addition to the library services and collections, the building also houses the computing services. Faculty librarians are dedicated to providing direct service to students.

K. Adequacy of Physical Facilities, Infrastructure and Instructional Equipment (as outlined in COMAR 13B.02.03.13)

UMB's 71-acre research and technology complex encompasses 67 buildings in west Baltimore near the Inner Harbor. Faculty have offices provided within their respective departments and the Graduate School has identified office space to house the Program Manager Specialist and instructional

technology personnel. UMB has adequate facilities, infrastructure and equipment to support any distance learning needs of the Master's Program. Students will have full access to the computing facilities at UMB. Students will be provided with UMB e-mail and library accounts and will have complete journal searching ability via PubMed. UMB possesses computing facilities that includes a networked computing environment for support of a broad range of information technology functions, including basic research, clinical research, patient information and general office management.

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

No new general funds will be required for implementation of the proposed MS and PBC which will be coordinated and administered fully through the Graduate School.

Tables 1 and 2 can be found in Appendix B.

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

Students will have the opportunity to evaluate courses and faculty through a standard evaluation of every course. Formal assessment planning is already in place throughout UMB Schools including the Graduate School. Our approach includes ensuring that student learning is in alignment with course learning outcomes, alignment of mission at institutional and program levels, alignment of mission with learning outcomes, then program outcomes with curriculum, flowing down to course outcomes and assignments. Assessment activities emphasize analysis of results and feedback loops for continuous improvement. Additional evaluation includes tracking of student retention, grade distributions, and cost-effectiveness, and regular academic program reviews consider these factors.

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

A key feature of UMB's mission and strategic planning involves respecting, valuing and achieving diversity. The Strategic Plan states: diversity represents a core value, which is defined as being

"committed to a culture that is enriched by diversity, in the broadest sense, in its thoughts, actions, and leadership." UMB realizes that it must embrace and celebrate diversity and become culturally competent. The State also has a goal of expanding educational opportunities for minority and educationally disadvantaged students.

The proposed new Master's program and PBC aims to address both UMB's and the State's cultural diversity goals. First, the delivery of some of the courses in the program by the use of distance learning technology will enhance minority student access, as it expands access and success for learners from diverse communities. Essentially, distance learning is quickly become the educational opportunity for those students who may not or would not be able to participate in a traditional graduate education. The emergence of the so-called "virtual universities" has had more success in attracting diverse populations compared to traditional colleges. Universities and their missions and Internet-based degree programs embracing core values emphasizing social change and community engagement have been highly attractive to historically underrepresented groups. For rural and isolated communities, distance learning can be the vehicle that conquers geography and space between teachers and students.

The second manner in which the proposed Master's and PBC addresses diversity goals is that distance learning not only achieves "access," but can also help ensure "success," as the technology of distance learning meets the needs of various learners and allows for differentiated instruction. Increasingly,

culture, language, and social factors are being recognized as having an impact on learning styles. To be sure to avoid any chance of stereotyping, we recognize that individuals within a particular culture display the traditional traits and cultural markers of that group to varying degrees and hence, while on one hand, all behaviors are found in all cultural groups, some behaviors are demonstrated more so in some cultures than in others. These variations can be due to ethnic group differences within the larger culture, socio-economic status, degree of acculturation to the mainstream society, gender, religion, and myriad other factors. Essentially, with the proper use of its varied technology, distance learning can address the needs of all populations, and especially underrepresented groups that can not only attract but can help thrive as well. Also, with its varied types of interactions, distance learning embraces a shift from passive to active learning and from competition to collaboration.

O. Relationship to Low Productivity Programs Identified by the Commission:

The proposed MS and PBC are not directly related to an identified low productivity program identified by the Maryland Higher Education Commission.

P. Adequacy of Distance Education Programs (as outlined in COMAR 13B.02.03.22)

Context of Online Education at UMB

As the State's public health, law, and human services university, the mission of UMB is to excel at professional and graduate education, research, patient care, and public service, and to educate leaders in health care delivery, biomedical science, global health, social work and the law. Also, UMB emphasizes interdisciplinary education in an atmosphere that explicitly values civility, diversity, collaboration, and accountability. UMB expects to achieve its mission in education excellence and to be competitive; the Graduate School has designed and offered online degree programs that respond to the following changes occurring in higher education (Allen, 2010).

1. **Education Pipeline.** The education pipeline includes a highly diverse prospective applicant pool. Prospective students are typically working adults who pursue part-time and non-residential educational opportunities, but who wish to remain in their regional geographic area, while pursuing advanced education. According to the National Center for Education Statistics, National Postsecondary Graduate Student Aid Study (NCES, NPSAS: GR; 2017), between the period of 2008 and 2017, there was a slight increase (3%) in the number of graduate students reporting full-time (FT) enrollment at a single institution. We suspect this may be partially influenced by availability of new online educational programs, where one can work, be considered enrolled FT, yet negotiate academic studies as one's lifestyle permits.
2. **Changing Demographics.** Data indicate a shift from the traditional student (the 18-22-year-old, full-time resident) to older students studying part-time. In 2015-2016, the National Center for Education Statistics (NCES, 2017) reported that 37.58% of graduate students were married and the average graduate student was 32 years old ($SD= 9.66$). Nearly 9% of single/unmarried/divorced graduate students reported dependents, and nearly 60% of graduate students were female.
3. **Technology Shift.** Educational research suggests that online education achieves the same as, or better student learning outcomes, than traditional face-to-face delivery models (Tallent-Runnels, et al., 2006; Means et al., 2009). Online delivery is far outpacing traditional forms of educational delivery. Between 2002 to 2008, online enrollments grew at an annual rate of 19% vs. 1.5% versus all of Higher Education. By the fall of 2008, 25% (4.6 million) of all students took at least one online course. In 2019, the top five highest reported college enrollments nationally four were online universities, offering at least some graduate programs (NCES).

4. Growth of Mobile Technologies. Mobile technologies and miniaturization are changing the computing environment and the educational delivery paradigm. Technologies like netbooks, e- Readers, iPhones and iPads have revolutionized the delivery space and to provide anywhere, anytime learning.
5. Web 2.0 Revolution. Other technologies that are already figuring widely into the future of education are part of the Web 2.0 revolution. The use of a variety of technologies is disaggregating the educational experience into 'the cloud'. Many of the technologies for the future, like blogs, wikis, podcasts, video, social networking and social media, virtual worlds, mobile learning, and Personal Learning environments, will have profound effects on the future learning landscape.

Essentially, online education represents a strategy that can address the restrictions of traditional onsite college courses, opening up accessibility for variety of learners, for a variety of reasons and expanding access to global education opportunities and expertise, beyond the walls of the campus. Major determinants of successful online programs include 1) course design that incorporates best practices (e.g. course alignment, integration of technology and content), 2) quality faculty who can engage students in the material (e.g. provide feedback and relevant expertise), and 3) provide responsible academic oversight. All three of these determinants are present in this proposal.

Ensuring Effective Instruction

Based on Quality Matters standards, UMB developed a rubric which details the best practices for distance education; this rubric helps faculty and instructional designers create the courses; assesses the readiness of the course and ensures that the online courses are instructionally and pedagogically sound. The best practices are a synthesis of strategies, activities, design techniques, and organizational items that have been successful in higher education. The specific domains of this checklist are as follows:

- Course overview and introduction to the students
- Course organization and design
- Learning Objectives (competencies)
- Instructional Materials
- Learner Communication, Interaction and Collaboration
- Assessment and Evaluation (measurement)
- Course Technology
- Learner Support

The Learning Management Platform UMB utilizes and provides IT support for is the Blackboard Learning Management System for online course delivery. Within Blackboard, is the Collaborate conferencing software that we will use for our synchronous live activities, i.e., orientation and presentation face-to-face class sessions and recurring webinars. Additionally, the Faculty Center for Teaching and Learning which houses expert Instructional and Educational Media Specialists, uses of a video camera to record

lectures, integrate webcams, and an interactive smart board. We also use the Camtasia software for screen lecture capture.

Instructional Design Team

The following individuals from the Instructional Design team have been assigned to direct the distance education strategy for the four additional certificate programs:

Christina Cestone, PhD | Executive Director, Faculty Center for Teaching and Learning

Dr. Cestone earned a Ph.D. in Educational Psychology from the University of Texas at Austin and a Master's degree in Human and Organizational Learning from The George Washington University. Dr. Cestone research includes faculty learning communities, instructional methods, motivation, and interprofessional education. Most recently, as Associate Dean of Assessment and Evaluation for Drexel University, College of Medicine, Dr. Cestone directed medical student assessment, and course and curriculum evaluation in an integrated medical curriculum for 1,100 medical students. Her interests are in program evaluation, and curriculum and instructional development involving active learning methods. She presents her work nationally and is active in the American Education Research Association (AERA) and the Professional and Organizational Development Network (POD), a national association of directors of Centers for Teaching and Learning.

Kevin Engler, MA | Instructional and Curriculum Designer

Mr. Engler holds a Masters of Arts degree in Instructional Design. Mr. Engler provides instructional design, audio-visual support, and faculty training in the use of instructional technologies. He is responsible for the overall pedagogy, planning and designing of course content and assessments for distance education courses in the program. Mr. Engler is knowledgeable in adult learning theory, distance education pedagogical techniques, course development planning and process management. Mr. Engler is trained and certified in the Quality Matters methodology and the ADDIE approach to course design. He has experience and background in writing instructional objectives that utilize Bloom's Taxonomy.

Erin Hagar, MA/MFA | Instructional and Curriculum Designer

Ms. Hagar taught Spanish at the college level and has worked in instructional and curriculum design for colleges and universities since 2000. She previously worked at Montgomery Community College and Johns Hopkins University, helping faculty incorporate new pedagogical practices and technologies into their face-to-face and online courses. Her areas of expertise include faculty development and training, online course design using the Quality Matters standards, and authentic activities and assessments. She is responsible for the overall pedagogy, planning and designing of course content and assessments for distance education courses in the program.

Sharon Gillooly | Senior Media Production Specialist

Ms. Gillooly leads media production for the AIDE team. Her main focus is to produce videos that support academic instruction. After a long career in documentary television, she completed a Master's Certificate in Online Instructional Development from Florida State University where her work focused on instructional design and emerging technologies. Ms. Gillooly is especially interested in the use of media to enhance learning.

Eric Belt, MS | Instructional and Curriculum Designer

Mr. Belt holds a M.A., Distance Education & E-Learning from UMUC and a B.S., Business Administration from Towson University. Prior to joining UMB, Eric was the Director of Learning Technology at the College of Southern Maryland and, formerly, the Assistant Director of eLearning at Howard Community College. Eric has served as an Instructional Designer both virtually and on-campus for various community colleges across the U.S. and is active in the Maryland Online community. Eric brings a skills and interest in advancing the

scholarship of teaching and learning through course design, instructional communication, and faculty professional development. Mr. Belt is currently an Educational Technology doctoral student at Boise State University pursuing research in communication, interaction, and engagement in online courses.

Collectively, the distance learning team will provide the following services to ensure that best pedagogical practices are used to train and support the most of effective presentation of their course content.

- Guided tutorials on the online course development process, with open questions and answer session.
- Written instructions accompanied by training videos to guide faculty on how to use the learning management system.
- A manual for the faculty regarding principles of good practice and the pedagogy of distance education.
- Provide timely support to the faculty in the use of the technology and trouble shoot any problems that might arise during the course of instruction.
- Work with faculty to design and develop courses, monitor the delivery of the course, and assess and revise the course for future offerings.

Supporting Students in Distance Education

Most of the courses for the MS and PBC in Vulnerability and Violence Prevention will be online, and others will be in person. We realize that the key to the success of the online courses is dependent on a) students knowing upfront the assumptions, requirements and responsibilities of taking an online course, 2) the ability of students to have the background, knowledge, and technical skills to undertake an online program; and 3) their having access to academic and technical support services to support their online activities. Accordingly, we will provide the following services to support the students in accessing distance learning technology:

- Communicate to students the nature of online learning, including their requirements, roles and responsibilities, and access to support services. All of our advertising, recruiting, and admissions materials shall clearly and accurately represent the program and the services available.
- Ensure that enrolled students shall have reasonable and adequate access to the range of student services to support their learning.
- Ensure that accepted students will have the background, knowledge, and technical skills needed to undertake the program.
- Make available the Library Services to students so that they can have access to research databases, online catalog of books and media, chat with or e-mail a Librarian, electronic interlibrary loan, and more.

Evaluation and Assessment of Online Courses

We will adhere to a quality improvement model for assuring the continuous quality of the online courses. The process will involve the following steps:

1. Assessment of course readiness as measured by our quality indicators of best practices (including assessment of faculty readiness)

2. Monitoring of course delivery as assessed by the instructional designers with use of our "course evaluation' rubric"
3. Obtainment of feedback from the faculty and students and instructional designers.
4. Analysis of feedback as performed by the Distance Learning Committee.
5. Institute course revisions based on comments by the Distance Learning Committee.

Finally, to ensure the sustainability of the distance learning program, the Academic Affairs Office at UMB affirms the following:

- UMB Policies for faculty evaluation includes appropriate consideration of teaching and scholarly activities related to programs offered through distance learning.
- Commitment to ongoing support, both financial and technical, and to a continuation of the program for a period sufficient to enable students to complete a Master's degree or certificate.

Appendix A: Program Faculty

Faculty Member Name: Flavius R.W. Lilly
Terminal Degree and Field: PhD, Gerontology
Academic Title/Rank at UMB Graduate School: Associate Professor
Status: Part-time
Courses Faculty Member Will Teach in the Proposed Program: VVR 601 Launch Seminar (2 credits); VVR 611 MS Capstone (4 credits); VVR 612 Culminating Seminar (2 credits)

Faculty Member Name: Virginia Rowthorn
Terminal Degree and Field: JD, LLM (Global Health Law)
Academic Title/Rank at UMB Graduate School: Senior Lecturer
Status: Part-time
Courses Faculty Member Will Teach in the Proposed Program: VVR 601 Launch Seminar (2 credits); VVR 611 MS Capstone (4 credits); VVR 612 Culminating Seminar (2 credits)

Faculty Member Name: Tanya Sharpe
Terminal Degree and Field: PhD, Social Work
Academic Title/Rank at UMB Graduate School: Adjunct Professor (also Associate Professor, Factor-Inwentash Chair in Social Work in the Global Community)
Status: Adjunct Professor
Courses Faculty Member Will Teach in the Proposed Program: VVR 603 Vulnerability and Violence: Theory and Practice (4 credits)

Faculty Member Name: David McIlhatton
Terminal Degree and Field: PhD, Spatial Analysis and Data Manipulation
Academic Title/Rank at UMB Graduate School: Adjunct Professor (also Professor, Centre for Trust, Peace and Social Relations, Coventry University, England)
Status: Adjunct Professor
Courses Faculty Member Will Teach in the Proposed Program: VVR 602 The Nature of Violence: Theory and Practice (4 credits)

Faculty Member Name: Mike Hardy
Terminal Degree and Field: PhD, Economics
Academic Title/Rank at UMB Graduate School: Adjunct Professor (also Professor and Executive Director, Centre for Trust, Peace and Social Relations, England)
Status: Adjunct Professor
Courses Faculty Member Will Teach in the Proposed Program: VVR 602 The Nature of Violence: Theory and Practice (4 credits)

Faculty Member Name: Toby Guerin
Terminal Degree and Field: JD
Academic Title/Rank at UMB Graduate School: Adjunct Professor (also Managing Director, Center for Dispute Resolution, at the University of Maryland School of Law (C-DRUM) and Clinical Law Instructor
Status: Adjunct Professor
Courses Faculty Member Will Teach in the Proposed Program: VVR 605 Sustaining Non- Violence: Theory and Practice (4 credits)

Faculty Member Name: Lori Edwards
Terminal Degree and Field: DrPH, Occupational Health
Academic Title/Rank at UMB Graduate School: Adjunct Professor (also Assistant Professor, University of

Maryland School of Nursing)

Status:

Courses Faculty Member Will Teach in the Proposed Program: VVR 604 Violence Prevention and Interventions (4 credits)

Appendix B. Resources and Expenditures

TABLE 1: PROGRAM RESOURCES					
Resource Categories	Year 1	Year 2	Year 3	Year 4	Year 5
1. Reallocated Funds					
2. Tuition/Fee Revenue (c +g below)	\$0	\$0	\$0	\$0	\$0
a. Number of F/T Students	0	0	0	0	0
b. Annual Tuition/Fee Rate	\$0	\$0	\$0	\$0	\$0
c. Total F/T Revenue (a x b)					
d. Number of P/T Students	12	15	18	21	21
e. Credit Hour Rate	\$675	\$688	\$702	\$716	\$730
f. Annual Credit Hour Rate	21	27	27	27	27
g. Total P/T Revenue (d x e x f)	\$170,012	\$278,698	\$341,126	\$405,940	\$414,059
3. Grants, Contracts & Other External Sources					
4. Other Sources					
TOTAL (Add 1 – 4)					

TABLE 2: PROGRAM EXPENDITURES:					
Expenditure Categories	Year 1	Year 2	Year 3	Year 4	Year 5
1. Faculty (b + c below)	\$109,542	\$193,837	\$199,652	\$205,642	\$211,811
a. Number of FTE	1.10	1.39	1.39	1.39	1.39
b. Total Salary	\$85,580	\$138,455	\$142,609	\$146,887	\$151,294
c. Total Benefits	\$23,962	\$55,382	\$57,043	\$58,755	\$60,517
2. Admin. Staff (b + c below)	\$100,800	\$56,700	\$13,020	\$13,410	\$13,812
a. Number of FTE	0.8	0.45	0.10	0.10	0.10
b. Total Salary	\$72,000	\$40,500	\$9,300	\$9,579	\$9,866
c. Total Benefits	\$28,800	\$16,200	\$3,720	\$3,831	\$3,946
3. Support Staff (b + c below)	\$15,400	\$15,862	\$16,338	\$16,828	\$17,333
a. Number of FTE	0.20	0.20	0.20	0.20	0.20
b. Total Salary	\$11,000	\$11,330	\$11,670	\$12,020	\$12,381
c. Total Benefits	\$4,400	\$4,532	\$4,668	\$4,808	\$4,952
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	\$20,000	\$10,000	\$10,000	\$10,000	\$10,000
TOTAL (Add 1 – 7)	\$245,742	\$276,399	\$239,010	\$245,880	\$252,956

Appendix C: Sample Plan of Study

PBC	Vulnerability and Violence Reduction	
Year 1	Course	Credits
Fall A 2021	VVR 602 The Nature of Violence: Theory and Practice DM/MH	4
Fall B 2021	VVR 603 Vulnerability and Violence: Theory and Practice TS	4
Spring A 2022	VVR 604 Violence Prevention and Interventions LE	4
Spring B 2022	VVR 605 Sustaining Non- Violence: Theory and Practice TG	4
PBC Total		16

MS	Vulnerability and Violence Reduction	
Year 1	Course	Credits
Fall A 2021	VVR 601 Launch Seminar FL/VR	2
Fall A 2021	VVR 602 The Nature of Violence: Theory and Practice DM/MH	4
Fall B 2021	VVR 603 Vulnerability and Violence: Theory and Practice TS	4
Spring A 2022	VVR 604 Violence Prevention and Interventions LE	4
Spring B 2022	VVR 605 Sustaining Non- Violence: Theory and Practice TG	4
Subtotal		18

Year 2		
Fall A 2022	INNO 650 Community Engagement and Partnerships (Jim Kucher)	3
Fall B 2022	VVR 610 Research Practicum TS	3
Spring A 2023	VVR 611 MS Capstone FL/VR	4

Spring B 2023	VVR 612 Culminating Seminar FL/VR	2
	Subtotal	<u>12</u>

Total MS
Credits 30

Appendix D: MOU with Factor-Inwentash Faculty of Social Work at the University of Toronto and the Centre for Trust, Peace & Social Relations at Coventry University in England

Memorandum of Understanding

**University of Maryland, Baltimore Graduate School
and
Factor-Inwentash Faculty of Social Work at the University of Toronto
and
The Centre for Trust, Peace & Social Relations at Coventry University (United Kingdom)
For the
Master of Science in Vulnerability and Violence Reduction and a Post-Baccalaureate Certificate in
Vulnerability and Violence Reduction**

BACKGROUND

University of Maryland, Baltimore Graduate School (UMBGS), an academic unit of the University of Maryland Baltimore (UMB), a public university of the State of Maryland, and the Factor-Inwentash Faculty of Social Work at the University of Toronto (FIFSW) and the Centre for Trust, Peace & Social Relations at Coventry University in the United Kingdom (CTPSR) enter into this Memorandum of Understanding (MOU) to describe how the three universities will foster academic cooperation to deliver a Master of Science (MS) in Vulnerability and Violence Reduction and a Post-Baccalaureate Certificate (PBC) in Vulnerability and Violence Reduction. The proposed degrees represent a unique interdisciplinary and international collaboration between UMB, FIFSW and CTPSR.

With this degree and certificate program, the undersigned parties intend to create an opportunity for students to explore critical approaches to the understanding of vulnerability and risk within communities challenged by violence. Violence and vulnerability is seldom researched or taught from a multidisciplinary lens, which is critical to developing solutions. In addition to the multidisciplinary lens, it is critical to study violence and solutions from a comparative perspective to appreciate the impact of multiple determinants on the evolution of violence and an expanded range of solutions to address violence.

In consideration of the mutual benefit of establishing a cooperative relationship, the parties agree as follows:

PURPOSE & SCOPE

1. The primary objective of this MOU is to establish collaborative and cooperative efforts between UMBGS, FIFSW and CTPSR to implement a PBC and MS degree program that will consist of 30 credits and a PBC that will comprise 16 credits. The academic program will commence in August 2021.
2. The MS program will be delivered in a hybrid format of 4 in-person credit hours and 26 online credit hours and the proposed PBC will be delivered entirely online. For the proposed MS, the learning experience will involve a combination of an in-person launch seminar, online lectures, interactive case studies, a research-based capstone project, and a culminating in-person workshop to share research and develop implementation plans. For the PBC, the learning experience will consist of online lectures, planned synchronous online “live events”, and interactive case studies.

1

3. The 27 credits of new content will be created by faculty members at UMB, FIFSW and CTPSR and delivered via the EdX online learning management system. The 3 credits of existing content is an existing online course offered by UMBGS.
4. The degree will be offered by UMBGS in accordance with the applicable policies, procedures, federal and state laws and regulations that govern UMBGS programs.

RESPONSIBILITIES OF UMBGS

After program development, UMBGS will initiate the MS and PBC degree programs at UMB and will take on the following program administration responsibilities:

1. Certify student eligibility for enrollment in the MS and PBC degree programs, admit, and award the MS or PBC degree upon successful completion of degree requirements applicable to UMB policies and procedures.
2. Maintain student records pertaining to matriculation and progression toward the MS and PBC degrees.
3. Conduct general orientation for students entering the MS and PBC degree programs.
4. Be responsible for the academic and administrative standards and accreditation of the MS and PBC degree requirements pursuant to UMB policies and procedures
5. Collect tuition from students enrolled in the MS and PBC program and provide financial support to the MS and PBC program pursuant to UMB policies and procedures.
6. Maintain accreditation of the MS and PBC program from Middle States Commission on Higher Education.
7. If necessary, provide information to students regarding visa status and U.S. export control screening.
8. Degree program faculty in UMBGS, FIFSW, and CTPSR will work with UMBGS instructional designers to create the curriculum using a consistent format.
9. Assign adjunct faculty appointments to contributing FIFSW and CTPSR faculty members as determined by UMBGS. The program's faculty members will be compensated for course development and teaching pursuant to established rates for such services pursuant to UMB policies and procedures.
10. Admission and continuation to either program will be at the sole discretion of UMBGS based on UMBGS admission and degree policies and procedures.
11. Designate Program Director(s) dedicated to the MS and PBC degree program. The responsibilities of these positions are to:
 - a. Oversee development of the courses that are part of the MS and PBC program curriculum, ensuring the responsible faculty member is developing the course as agreed between the parties;

- b. establish the separate Admissions, Curriculum and Student Progressions committees;
- c. Serve on an ongoing basis on the Admissions, Curriculum and Student Progressions committees;
- d. Oversee the assigned faculty members' delivery of coursework for students enrolled in the MS and PBC program in accordance with the MS and PBC curriculum;
- e. Meet regularly with the UMB Graduate School Administration.

RESPONSIBILITIES OF FIFSW and CTPSR

1. Obtain FIFSW or CTPSR, as appropriate, approval for, and conduct, all aspects of the MS and PBC program that involve FIFSW and CTPSR, including approval of teaching responsibilities, use of the designated online learning system, advertising and marketing, faculty travel associated with the program, and use of FIFSW and CTPSR facilities as needed for meetings or program events;
2. In consultation with the UMB Program Director(s) and UMB Instructional Designers, develop assigned courses that are part of the MS and PBC program curriculum as agreed;
3. Teach assigned courses pursuant to UMB faculty teaching guidelines;
4. If unable to develop or conduct a course as a previously agreed, secure an appropriate replacement for the required time period. The UMB Program Director has final authority to approve the replacement faculty member based on UMB faculty and teaching guidelines;
5. Consult with the Admissions, Curriculum and Student Progressions committees as requested and as needed.

JOINT RESPONSIBILITIES

1. UMB, FIFSW, and CTPSR will each designate a Program Director for purposes of administering this MOU. In the event a Program Director is unwilling or unable to serve, an alternate will be designated;
2. Consult with each other promptly on any alleged violation of UMB, FIFSW, or CTPSR policy or applicable law, including (by way of example only) allegations of sexual harassment, discrimination, unprofessionalism or academic misconduct. Cooperate in investigation and resolution of complaints in accordance with applicable UMB policies and procedures;
3. At the end of each academic year, the parties will evaluate the effectiveness of this MOU and make suggestions as to what mutually agreeable programmatic changes or amendments, if any, should be made.

NON-DISCRIMINATION

All undersigned institutions subscribe to the policy of equal opportunity and will not discriminate on the basis of race, sex, sexual orientation, gender identity or expression, age, ethnicity, religion, creed, or national origin in the programs and activities covered under this MOU. Both institutions shall abide by these principles in the administration of this MOU.

1

RIGHTS

As joint creators of the curriculum and content of the MS and PBC programs in Vulnerability and Violence Reduction, UMB, FIFSW, and CTPSR will jointly own intellectual property arising from the collaboration. Each party may develop and implement their own degree programs at their respective institutions based on the collaboratively developed content.

DISPUTES

If any controversy or dispute should arise between the parties with respect to the agreement or performance thereunder and cannot be resolved by good faith discussion among the parties, such controversy or dispute shall be submitted to the leadership of the parties who shall endeavour to find an amicable resolution of such dispute within thirty (30) days of submission of the matter to them.

TERM, RENEWAL, AND TERMINATION

1. Any party, upon 90 calendar day's written notice sent to the address or email address given below, shall have the right to terminate this MOU for any reason. The parties may mutually agree to terminate based upon the annual evaluation of activities under this MOU. To the extent feasible, each shall perform the roles and responsibilities provided herein up to the time of termination. Students currently enrolled in courses at time of termination will not be affected.
2. Unless earlier terminated, this MOU shall be in force among the parties hereto for a period of five years from the date of this MOU, and it is renewable upon written agreement of UMB, FIFSW, and CTPSR signed by their authorized officials. This MOU may be reviewed and revised at any time by mutual written consent of UMB, FIFSW, and CTPSR prior to the expiration of the foregoing period.

MISCELLANEOUS

1. This MOU shall not be construed to create a relationship of partners, brokers, employees, servants or agents as between the parties. The parties to this MOU are acting as independent contractors. Each party will comply with its respective national, state, and local laws.
2. The parties acknowledge that the acceptance of students for participation in the activities under this Agreement must take into account and may be affected by the restriction of the Export Control Laws of the United States and the UMB policies regarding export controls. This includes the Export Administration Act and its implementing regulations, the Export Administration Regulations (15 CFR §§ 730 *et seq.*), the Arms Export Control Act and its implementing regulations, and the International Traffic in Arms Regulations (22 CFR §§ 120 *et seq.*).
3. Force Majeure. The parties shall be released from their respective obligations in the event of national emergency, war, and prohibitive governmental regulation or if any other cause beyond the reasonable control of the parties or either of them renders the performance of this contract impossible.
4. Non-Assignment. This MOU may not be assigned or changed by either party without the advance written consent of the others. This MOU shall be binding upon the heirs, personal representatives, successors, and permitted assigns of the parties.

5. No Third-Party Beneficiaries. This MOU shall be only for the benefit of the undersigned parties and their permitted successors and assigns, and no Student or other person shall be deemed to be a third-party beneficiary of this Agreement.
6. Notices. Any additions, changes or deletions must be approved, in writing and signed by an authorized party of each Party. Any notice to the parties as required by this Agreement must be in writing, signed and directed to the signatories named below or such substitute addresses as a Party provides by proper notice.
7. This Agreement is a public record of the State of Maryland.

BY SIGNING BELOW, EACH PARTY REPRESENTS THEY AGREE WITH THE INFORMATION HEREIN AND THEY ARE AUTHORIZED TO EXECUTE THIS AGREEMENT ON BEHALF OF THEIR ORGANIZATIONS.

FOR: University of Maryland, Baltimore
BY:

Roger Ward
Dean
620 West Lexington Street
Second Floor, Room 2112
Baltimore, MD 21201, U.S.A
Phone: 410-706-2304
Fax: 410-706-0500
Email: rward@umaryland.edu

Date

FOR: Factor-Inwentash Faculty of Social Work at the University of Toronto

BY:

Name
Title
Address
Email

Date

FOR: The Centre for Trust, Peace & Social Relations at Coventry University (United Kingdom)

BY:

Name
Title
Address
Email

Date

**BOARD OF REGENTS**SUMMARY OF ITEM FOR ACTION,
INFORMATION, OR DISCUSSION**TOPIC:** Update: Diversification of the Faculty**COMMITTEE:** Education Policy and Student Life**DATE OF COMMITTEE MEETING:** Tuesday, May 5, 2020

SUMMARY: For years, USM institutions have prioritized diversifying the faculty and creating and sustaining more inclusive campus environments for the faculty. In April 2018, USM hosted a Symposium on the Diversification of the Faculty for USM institutions' administration, faculty, staff, and students to examine this critical issue and learn lessons from effective practices and informative research being explored within the USM and by USM leaders. The day included opportunities for institutional team time to more deeply explore the issues at the campus level and to discuss the development or enhancement of plans to create faculty communities that are more diverse and inclusive.

Prior to the Symposium and since, institutions (and/or departments and colleges within the institutions) continue to monitor the diversity of search committees, target job advertisements to specific publications and networks, work to better understand how implicit bias relates to hiring practices, train search committees to use inclusive hiring practices, track the diversity of applicants and hires, create faculty networking groups and mentoring programs, and analyze data to determine where progress has been made and is needed.

The current update includes a summary report from each USM institution and a brief presentation by the University of Maryland, Baltimore County, which was featured at the Symposium for their innovative and effective work.

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: May 5, 2020

BOARD ACTION:

DATE:

SUBMITTED BY: Joann Boughman 301-445-1992

jboughman@usmd.edu



2020 Cultural Diversity Report
Section 4 – Diversification of Faculty and Staff

As Bowie State University has a long-standing commitment to diversity in all of its forms. The University community believes that its educational environment is enriched by the diversity of individuals, groups and cultures that come together in a spirit of learning. Goal 4 of BSU's *Racing to Excellence FY 2019-FY 2024 Strategic Plan* furthers the institution's commitment to a campus culture of diversity and inclusion. Objective 4.1 focuses on sustaining our community of inclusion by fostering and supporting a safe, civil, and welcoming environment for students, faculty and staff. We work toward this goal by being intentional about how our community encourages involvement, respect and connection among its members.

Examples of long-standing and recent activities that have resulted in the increased diversification of faculty and staff are listed below.

- Bowie's Affirmative Action Plan contains a commitment to increase the diversity of recruitment pools through expanded job postings. During FY 2020, BSU's Human Resources Department contracted with JobTarget to automate job posting and manage recruitment efforts more efficiently. JobTarget uses analytics to distribute job postings on diversity sites that target veterans, individuals with disabilities, minorities and women through its partnership network. Preliminary data indicate that the use of JobTarget has expanded the applicant pool for certain job classifications. The Human Resources department will assess the effectiveness of the JobTarget partnership at the end of the fiscal year.
- The Office of Equity Compliance has expanded its training programs to further campus education about the many layers of diversity and ensuring equal opportunities for students and all employees. Additionally, trainings on avoiding implicit bias and the value of diversity at every level of the University are offered as part of the faculty and staff search processes.
- Created in August 2019, the Office of Multicultural Affairs provides holistic student development reflective of the University's mission and strategic goals. The office has trained residential students and athletes on cultural sensitivity and hate biases, held multiple forums on diversity and LGBT+ issues, and has trained over 25 faculty and staff to be safe space certified for LGBT+ students.

It is Bowie State University community commitment to diversity that has led to increased diversification of its faculty and staff. Presently, 35% of Bowie's full-time faculty and 23% of full-time staff identify as non-African-American. This percentage has increased from 30% full-time faculty and 21% full-time staff identifying as non-African-American in 2014.

COPPIN STATE UNIVERSITY – USM Cultural Diversity Report – [one page]

Section 4: Diversification of Faculty and Staff

The following is a description of one strategy that has proven most successful in increasing the diversity of faculty and staff of the campus. The summary below provides evidence that demonstrates its success and supports continued practice.

GOAL 1

Coppin State University is committed to *increasing the numerical representation of traditionally underrepresented groups among students, administrative staff, and faculty.*

Strategy: 1.

Purposeful conversation designed to be more reflective and direct in efforts to recruit, hire, and retain a diverse faculty and staff body using online and print publications that reach populations of various race and ethnicities to respond to NSSE survey results where students indicate a desire to interact with more diverse faculty.

Coppin State University continues to recruitment of faculty and staff by utilizing online publications that reach populations of various race and ethnicities, such as the *Chronicle of Higher Education, Diverse Issues, and Higher Education Jobs.com*. Furthermore, efforts are made to advertise to diverse groups through professional journals and associations related to specific disciplines detailed in each position announcement. Data show that overall, faculty recruitment has slowed over the years due to financial constraints. In AY 2019-2020, the University had 246 members of personnel classified across all types of faculty position; down from 250 in the previous year (*Note: the faculty count includes all faculty, Full-time tenure/tenure track, full-time non-tenure/tenure track, adjuncts, and library personnel classified as faculty*). Of the 246 faculty members, 57% are female and 43% are male. Since the baseline report year 2008-2009, the population of faculty who are African American has decreased from 92% to 74%, while other ethnic groups experienced incremental increases during the same period. For example, Asian faculty member representation increased from 3% to 7%. While a successful strategy, data suggest that enhancements may be made to continue to increase the diversity of faculty personnel in underrepresented groups, especially among Native Americans.

The strategy for increasing diversity among the staff are similar. The University advertises in diverse journals and publications for staff positions. The University experienced a decrease in the number of staff members since the baseline year from a total of 292 to 210. In AY 2019-2020, the number of African American staff remained at 84% over the previous year, while Asian staff increased from 3% to 4%. White staff members decreased from 8% to 7%. Data show that efforts to increase racial and ethnic representation of staff could further be enhanced. The University will continue to advertise in diverse publications and explore cost-effective and professional social media venues such as LinkedIn and other outlets specific to job announcements for staff.



One University. A World of Experiences.

OFFICE OF THE PROVOST
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TO: Zakiya S. Lee, Ph.D., Assistant Vice Chancellor for Academic and Student Affairs
University System of Maryland

FROM: Michael B. Mathias, Ph.D., Interim Associate Provost
Frostburg State University

SUBJECT: Diversification of Faculty and Staff

DATE: April 21, 2020

This memorandum constitutes Frostburg State University's response to your request for the following information:

Provide a description of the one strategy that has proven most successful in increasing the diversity of faculty and staff of the campus, and what evidence demonstrates its success. (1 page)

Frostburg's Cultural Diversity Plan and its Equity and Inclusion Plan articulate a number of strategies for increasing the diversity of faculty and staff at the institution. Several of these strategies, in combination, have led to modest success in diversifying certain occupational areas.

- All searches for faculty and staff positions at Frostburg target as broad and diverse an applicant pool as possible. Advertisements are posted nationally, and the University utilizes the diversity resources offered by various recruitment sites, e.g., the Diversity and Inclusion Package offered by HigherEdJobs.
- All searches in the Academic Affairs division require applicants to submit a statement outlining their commitment to diversity, equity, and inclusion, signaling Frostburg's commitment to these values and letting all qualified candidates know they are welcome at the University.
- All search committees for faculty and staff positions at Frostburg require one member of the committee to be responsible for ensuring that minority outreach is a priority. All search committees must submit documentation of minority recruitment efforts to FSU's Office of Human Resources and FSU's Director of ADA/EEO Compliance. Such efforts typically include:
 - Identifying discipline-specific advertising sites visible to minority candidates, e.g., MinorityNurse.com.
 - Contacting colleagues at other institutions to seek nominations of minority students nearing graduation, recipients of fellowships and awards, or other interested persons.
 - Making personal contacts with minorities at professional conferences and inviting them to apply to FSU positions.

It is difficult to demonstrate the efficacy of any one of these strategies independent of the others, but there is evidence that, collectively, these strategies have resulted in moderate gains over the past three years (2017-2019). In 2017, minority faculty comprised 14.42% of the total Tenure/Tenure Track Instructional Faculty population and in 2019 that rate rose to 16.08%. Between 2017 and 2019, the rate of representation for African Americans/Blacks within this group rose from 8.17% to 10.55%. In 2017, 6.16% of the Executive/Administrative/Managerial Staff were members of minority groups and in 2019 that rate rose to 7.44%. Between 2017 and 2019, the rate of representation for African Americans/Blacks in this occupational category rose from 4.52% to 6.27%. Most notably within this category, 50% of Frostburg's current Executive Cabinet members are African American/Black, and two out of three of the University's college deans are members of a minority group. These minority executive-level leaders were all hired after 2017. Significant gains have been realized in the Professional Staff category. In 2017, minority staff comprised 11.65% of the total Professional Staff population and in 2019 that rate was 17.1%. Between 2017 and 2019, the rate of representation for African Americans/Blacks in Professional Staff rose from 3.88% to 14.47%.

**Examples of successful strategies employed to increase
the diversity of faculty and staff at Salisbury University (SU)
4/22/20**

Strategy 1: Active consultation and engagement between HR recruiter and hiring manager and/or selection committee.

While this strategy may appear basic and straightforward to the casual observer, it represents a fundamental shift in focus and emphasis of our talent acquisition process to more deliberate collaboration and ongoing consultation by the recruiter. As a result of process change, the recruiter actively identifies applicant pools using a variety of mechanisms (e.g., web-based platforms, professional journals and diversity-based organizations) to attract a high degree of interest from diverse populations. To highlight the impact of this effort, over the last year, the University conducted four searches for mission-critical positions:

- Associate Vice President for Diversity & Inclusion/Chief Diversity Officer (newly created position)
- Director of Student Counseling
- Director of the Disability Resource Center
- Director of TRiO ACHiEVE Student Support Services

In all cases, using in-house recruitment resources and engagement, these key professional positions were filled with individuals from historically marginalized and underrepresented populations.

Strategy 2: Faculty Learning Communities on Diversity and Inclusion

SU supports several Faculty Learning Communities (FLCs) related to diversity and inclusion. The PROMISE FLC cohort of faculty and staff consider how institutional commitment and peer mentoring nurture a culture of diversity and inclusion (PROMISE references an NSF-funded project among five USM institutions). In FY20, FLC members read the book, “Faculty Success through Mentoring: A Guide for Mentors, Mentees, and Leaders” to consider opportunities to promote underrepresented populations of faculty, staff and students who may wish to become academics. The PROMISE FLC goals are to: (1) collaborate with relevant SU offices to support efforts to strategically recruit, hire and retain underrepresented faculty and staff; (2) design and disseminate faculty and staff development programs to support mentorship, success and promotion of diverse members; (3) entice current candidates and future academics, including graduate and undergraduate students, to seek employment at a Primarily Undergraduate Institution like SU; and (4) present findings at workshops, conference sessions, online materials and in publications as an applicable model of diversity and inclusion. The PROMISE FLC’s work raised the awareness of faculty, staff and campus leadership regarding issues faced by diverse faculty, in hiring practices and affecting faculty retention. Work continues to achieve all of the goals listed above. Earlier this year, the University committed to establishing a Faculty Development Center and joined the National Center for Faculty Development & Diversity which provides a wide variety of resources for faculty onboarding, retention and development.



TOWSON.EDU

23rd of April 2020

University System of Maryland

ATTN: Zakiya Lee, Assistant Vice Chancellor for Academic and Student Affairs

**Inclusion &
Institutional Equity**

8000 York Road
Towson, MD 21252-0001

To the Committee on Education Policy and Student Life:

Towson University (TU) has employed a number of specific steps to ensure the recruitment, hiring, retention, and advancement of faculty in Academic Affairs. Specifically, during the last academic year, the Office of the Provost and the Office of Inclusion & Institutional Equity have partnered to provide the Faculty Search & Hire Toolkit, that introduces hiring committees to inclusive and equitable recruitment and interviewing practices.

The highly requested foundational workshop, *Successful Faculty Searches* details how a diverse faculty in an inclusive environment facilitates faculty and student success. This workshop also discusses the national and local challenges of recruitment of diverse faculty, unconscious bias as a social condition, eliminating micro-aggressions in the hiring process, and conducting a successful search based on national best practices (Roehling & Granberry Russell, 2012). Within the last academic year, 21 academic departments and 225 faculty have completed this workshop at Towson University.

○ 410.704.0203
oie@towson.edu
Towson.edu/inclusionequity

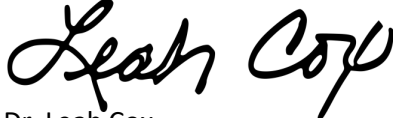


The Academic Affairs Outreach Plan is a form that was expanded and shared during the *Successful Faculty Searches* training. This form directs faculty search committees to an exhaustive list of Minority-Serving Institutions produced by the Rutgers University Center for Minority-Serving Institutions. It includes a section requesting a list of personal contacts and invitations, engaged outreach (such as conferences, professional meetings, and professional listservs), and a reminder to post active positions with the Higher Education Recruitment Consortium at www.hercjobs.org.

Additional workshops include *Writing a Job Description*, *De-biasing the Hiring Process*, and the *Search Chair Refresher Course*, which can be requested online. The combination of training modules, messaging, and collaboration has resulted in an increase in diverse faculty hires in departments that have historically faced challenges. Additionally, TU has had several targeted hires in historically challenging disciplines, for example men of color in Mathematics and Elementary Education.

Finally, every faculty position requested, every applicant pool, and final candidate selections must be reviewed by members of the Office of the Provost and the Office of Inclusion and Institutional Equity (OIIE). This layered review ensures that individuals engaging in all aspects of the new hire process at TU receive appropriate guidance and support for planning, recruiting, and attracting more diverse faculty hires.

Sincerely,



Dr. Leah Cox

Vice President, Equity and Compliance

Office of Inclusion and Institutional Equity





TO: Zakiya Lee, Assistant Vice Chancellor for Academic and Student Affairs
 FROM: Darlene Smith, Executive Vice President & Provost
 RE: Section 4 (Diversification of Faculty and Staff) of UB's Program of Cultural Diversity Annual Progress Report
 DATE: April 23, 2020

The most successful strategy in increasing UB's faculty and staff diversity is the sustained focus on key areas where inroads are obtainable rather than applying efforts too broadly. This concentrated approach was necessary as several factors posed major constraints to UB's progress. These factors include the current hiring freeze and hiring limitations due to actions associated with reduced student enrollment and resulting financial constraints – all factors that impact employee composition. The University knew that an all-encompassing approach to diversity and inclusion would not be as effective at this time, but that a focused strategy would yield greater results for the current timeframe. Therefore, following UB's Strategic Plan Goal 6.1(b) on diversity in the recruiting of staff and faculty, the University identified two areas where progress could continue and a strategy was feasible.

The first area involved employee training. Being mindful of and committed to Goal 6, the UB Office of Human Resources dedicated one staff position to lead employee training and development. The impact of this role was evident immediately by the increased number of employee training sessions on inclusion and higher employee participation rates for training sessions on various topics, such as discrimination and harassment. This enhanced training on diversity and inclusion supports UB's commitment to being a more culturally aware campus community and retaining the current population of diverse faculty and staff so that the University does not lose ground.

The second area of concentration involved faculty hiring. While each of UB's schools has developed and is in the process of implementing a comprehensive Faculty Diversity and Recruitment plan, we also know that the longevity of tenured faculty can hinder the turnover rate and stagnate diversity efforts. Therefore, in order to 'move the needle' on faculty diversity, University has concentrated on an area of direct impact – the hiring of adjunct faculty. As a result of this effort, UB experienced increased diversity among its adjunct faculty, increasing diversity from 13% in fall 2010 to 26% in fall 2019—doubling over a decade.

Diversity hiring efforts have continued with regular faculty as well, but the overall numbers are smaller. When opportunities arose to hire faculty, the UB Office of Human Resources and hiring committees focused on the diversity of the candidate pools for recruiting and hiring employees. For example, of the new faculty hired to begin their employment in mid-August 2019 at the start of the academic year, at least 70% of the new faculty were people of color, and at least 50% of those new faculty were female.

Work still remains to be done in other areas, but UB's strategy of focusing on two initiatives where improvements could be realized through a concentrated effort has produced successful results.



April 23, 2020

Section 4: Diversification of Faculty and Staff

UMB has engaged Dr. Damon Williams, a national expert in strategic diversity leadership, to inventory and design the campus's capabilities, initiatives, and structures. This engagement is positioning UMB to advance its efforts as a champion for effective strategies to improve diversity, equity, and inclusion (DEI) outcomes in the workplace. Dr. Williams' scope of work includes the planned conduct of 15-21 focus groups and a series of personal interviews with 75-120+ UMB leaders. These data will be transcribed and analyzed to identify key themes and a list of recommendations for actions. In summary, the DEI inventory and design project shall encompass the following actions below:

- To activate a campus-wide diversity, equity, and inclusion (DEI) inventory of capabilities, initiatives, and structures;
- To conduct a study of the lived experiences of diverse faculty;
- To conduct a benchmarking study of peer and aspirant institutions DEI efforts;
- To generate a tapered report with clear insights to support your efforts to strengthen your diversity, equity, and inclusion infrastructure;
- To create an interactive one-day event, that builds on the program inventory and creates a space for collaborative action planning to move the campus forward in their efforts to advance a campus community that is inclusive and excellent for all;
- To engage with faculty and staff in the UMB President's leadership program, supporting their development of more substantial strategic diversity leadership knowledge, skills, and abilities.

Results from the actions, as mentioned above, shall be shared, as appropriate, with the UMB community.

University leadership, the Schools, Human Resource Services (HRS), institutional research, the Diversity Advisory Council (DAC), and other units are engaged in multiple initiatives focused on advancing the diversification of faculty and staff. This work includes examining trends, evaluating survey results, and multiple other collaborations and actions designed to impact our diversity and inclusion goals positively. The Human Resource Services unit works closely with the DAC and each of the seven schools and administrative departments to further the goals of making UMB a more diverse and inclusive environment. In partnership with the DAC, HRS established a set of goals that included staffing and development action items. HRS also initiated the first-ever campus-wide Climate and Engagement survey in 2016 and the follow-up survey in 2019. The results from these surveys inform our practices and future planning.

Diversification of Faculty and Staff at UMBC—Diversity Report 2019-20

Faculty

Launched in 2015, UMBC STRIDE uses peer education to bridge the gap between macro-level faculty diversity recruitment policies and expectations (institutional and college) and micro-level practices within the departments and programs that conduct faculty searches. STRIDE consists of six highly respected faculty fellows. They are not scholarly experts in the area of diversity and inclusive excellence, but rather each has a demonstrated commitment to these principles. Fellows are mostly from majority groups. This signals that improving diversity and inclusion is a shared responsibility.

STRIDE engages in two main activities: campus-wide focused conversations and search committee consultations. There are six campus-wide focused conversations over the course of the recruitment and hiring cycle: 1) Developing an Effective Diversity Hiring Recruitment Plan (May/September); 2) Creating Shared Evaluation Criteria (October); 3) Best Practices for Inclusive Excellence in Application Review (November); 4) Best Practices for Inclusive Interviewing (December/February); 5) Best Practices for Inclusive Faculty Mentoring (March); and 6) Best Practices for Welcoming New Faculty (April). STRIDE also provides consultations with search committees at the request of a department or search that target specific aspects of the search. Depending on the search committee's needs, STRIDE fellows might help improve an active recruitment plan, provide feedback on inclusive language in job advertisements, develop shared evaluation criteria, implement practices to reduce implicit bias during application review, and/or design inclusive interview protocols and processes.

After 5 years, STRIDE is involved in all faculty searches, and colleges and committees proactively reach out to STRIDE for advice and counsel. Thus, STRIDE has bridged the gap between departmental practices and institutional/college policies. We have also seen an increase in the diversity of our applicant and interview pools, and ultimately our hires. In our most recent faculty recruitment cycle, we welcomed 14 new URM tenure-track faculty of the total 32 new tenure-track faculty (44%).

Staff

UMBC had an increase from 2018 to 2019 in the percentage of applications and ultimately the number of individuals hired for positions for the following categories: minority races, Hispanic ethnicity, identifying as having a disability, and identifying as a protected veteran. This increase cannot be linked directly to any one individual action.

The PageUp recruitment and hiring system has assisted in promoting UMBC values of diversity and inclusion in the hiring process include:

1. A diversity report is available for each position in PageUp showing the demographics of the applicant pool for the position. The report shows gender, race/ethnicity, disability status and veterans' status. The Search Chair or Hiring Manager can view the diversity of the pool at the various stages of recruitment (initial application, search committee review, phone screen, in person interview). Hiring Managers and Search Chairs are instructed on how to access and use the report in both group and individual trainings as well as instructions available online.
2. An Advertising Sourcing report is available for each position in PageUp showing the source from which the applicant located the posting/ad. The data assists the hiring departments in determining which sources are effective and most beneficial in posting future positions.
3. There was a 53 percent increase in the number of advertising sources used in 2019 over 2018. Applicants were not only learning of our positions from job posting sites but also from general UMBC branding (TV commercials and radio ads) and social media. Our top three sources are the UMBC website, higheredjobs.com and Indeed.

University of Maryland, College Park Programs of Cultural Diversity Report 2019-2020

Section 4: Diversification of Faculty and Staff. *Provide a description of the one strategy that has proven most successful in increasing the diversity of faculty and staff of the campus, and what evidence demonstrates its success.*

The most successful single strategy for increasing the diversity of faculty and staff consists of our Faculty Diversity and Hiring Initiatives as administered through the Office of the Associate Provost for Faculty Affairs. These include the following.

Postdoctoral Fellowship Program – In 2016, the University of Maryland joined the University of California-sponsored consortium of universities, originally organized in 1984, with the objective of building a pipeline of under-represented minority faculty. This consortium collaborates in seeking postdoctoral scholars who can contribute to an enhanced understanding of the experiences of historically underrepresented scholars through their research, educational background, or personal experience.

Priority for funding will be given to those units that expect to have a tenure-track faculty opening within the next two years for which the fellow might realistically compete. The expectation is that fellows would serve for two years, with a review and renewal during the spring of their first year. The Presidential Postdoctoral Fellowship does not convert automatically to a tenure track position, but fellows are eligible to apply for open tenure-track positions in academic units which are conducting searches.

For more details including the process for consideration and funding levels, see <https://faculty.umd.edu/appointment/hiring.html#postdoc>.

Assistant Professor Diversity Initiative – This program provides partial support for hires at the assistant professor level that enhance faculty diversity at the department and college levels. The intention is to secure faculty early in their academic careers who show great promise. Preference will be given to requests that increase the diversity of the unit and college; serve a need for additional faculty in that unit; and contribute towards the strategic goals of the unit, college, and university.

Applications are reviewed on a rolling basis by the Provost's Office and Faculty Diversity Hire Review Committee. Should the faculty member leave the university for any reason, the contributed funds will revert back to the Provost.

For more details including the process for consideration, joint appointments, funding levels, and required reports, see <https://faculty.umd.edu/appointment/hiring.html#asstprof>.

Senior Targeted Hire Diversity Initiative – This program provides support for the targeted recruiting of renowned senior faculty (tenured—generally full professor). Preference will be given to recruits who increase the diversity of the unit and college; have established a significant scholarly presence in their field/discipline at the national and/or international level; support an inclusive department, college, and university culture and environment; support the strategic goals of the unit, college, and university; and serve a need for additional faculty relative to workload in that unit.

Funding is limited and competitive, and applications are reviewed on a rolling basis by the Faculty Diversity Hire Review Committee.

For more details including the process for consideration, joint appointments, funding levels, and required reports, see <https://faculty.umd.edu/appointment/hiring.html#srth>.

Spousal Hires have also been helpful when recruiting couples.

Thus far, 18 Fellows have been brought in through the Postdoctoral Fellowship Program and there will be at least 5 more in the fall. With the support of the other two initiatives, 6 senior faculty and 15 assistant professors have been hired. All of these have been faculty of color.

**Office of the President**

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Diversification of Faculty and Staff Progress Report 2019-2020

Ethnic and racial diversity is extremely low in the environmental sciences compared with other STEM fields¹. The University of Maryland Center for Environmental Science (UMCES) is committed to expanding diversity and inclusivity across our faculty, staff and students. UMCES is very grateful to the senior leadership at USM, UMBC and UM College Park who have shared their experiences and ideas on how we collectively can make an impact in the earth and ocean science professions. Based on this advice, direction from our faculty who are engaged in NSF Diversity Initiatives and our Executive, Administrative, Staff and Graduate Student Councils, UMCES established the Diversity, Equity and Inclusion Collaborative (DEIC).

The DEIC's mission is to enhance our institutional culture of inclusivity and engagement and to provide a forum for developing and implementing innovations in diversifying the workforce in the environmental sciences. Additionally, the DEIC leverages relationships with local community members and external funders to ensure underrepresented minorities are an integral part of the community.

Specifically, the DEIC is charged with (i) enhancing a culture that is conducive to developing a community committed to diversity, equity and inclusion; (ii) provide an annual report comprising successes as well as identifying areas in need of improvement and further development; (iii) coordinate and communicate diversity and inclusion efforts across all units within UMCES; (iv) ensure efforts of diversity and inclusion are conducted in collaboration with the MEES Office and sister USM institutions where appropriate. Given the extensive interest across the six locations of UMCES, the DEIC is a collaborative with ongoing activities and regular meetings throughout the year that will be open to all faculty, staff, and students with smaller teams tasked with implementing specific actions.

Faculty Recruitment: Under the umbrella of the DEIC, recruitment of underrepresented minority faculty and staff continues to be an area of focus. Specific changes to UMCES recruitment (based on USM advice) include: (1) Search committees receive direction on best practices in faculty hiring, including implicit bias training, (2) Job advertisement is as broad as possible and the description reviewed by a professional trained in implicit bias, (3) Implementation of job search software that allows demographic tracking, (4) Ensure job description is placed in USM forums, (5) Search committee members actively encourage applications.

With the implementation of our hiring and recruitment system application in 2018, UMCES reports that 86% of total faculty and staff hires in 2018 were minorities or women and 77% in 2019.

¹ Bernard, R.E. and E.H.G Cooperdeck. No Progress on Diversity in 40 years. *Nature Geoscience* | VOL 11 | MAY 2018 | 292-295 |



DIVISION of ACADEMIC AFFAIRS

Office of the Provost and Vice President

Section 4 – Diversification of Faculty and Staff – Cultural Diversity Report

The University of Maryland Eastern Shore has been continuously committed to maintaining and increasing the diversity of its faculty and staff, as measured not only by race and ethnicity, but also by culture, identity, and perspective. As of 2019, UMES not only boasts the second-highest diversity index of all national public four-year institutions (see: <https://chronicle.com/article/facultydiversity2017>), but also shows an increase in ethnic and racial diversity over the last decade (see attached table.)

The single most effective strategy in maintaining and increasing this level of faculty and staff cultural diversity at UMES is acknowledging its importance and infusing it within all of our campus community systems. As an historically black and 1890 land grant university that only recently earned its R2 Carnegie Classification, we are driven to honor our past by building our future as an institution at which all students achieve beyond their potential, and where all faculty and staff know and act to realize this goal.

This is only possible if our campus culture is genuinely inclusive of each person's role in such an achievement, and perhaps more importantly, if everyone believes that our students, largely first-generation and under-represented minorities, are equal to any other in contributing to scientific research and discovery. This is our overriding goal and challenge. As such, we continue to forefront cultural diversity in the following specific ways:

1. Prioritizing research and scholarship through specific grants, contracts, and community relationships whose focus lies in fostering diverse scholars and in creating social equity.

UMES is the organizational head of the seven-member NOAA Living Marine Resources Cooperative Science Center (LMRCSC); the funding agency is NOAA Educational Partnership Program with Minority-Serving Institutions (EPP/MSI). The University is also a lead member in the Association of 1890 Research Directors (ARD), which is integrally involved in creating a society where all people have opportunities for wholesome living and learning through responsible pursuits of their goals and aspirations, with primary attention given to all people in society but in particular, those who are socio-economically deprived. In 2020, UMES was named a finalist in the Howard Hughes Medical Institute's (HHMI) Driving Change Competition, whose specific focus is creating an inclusive campus culture.

2. Using UMES' newly constituted Office of Institutional Equity & Compliance (OIEC) as an integral part of the hiring process

In conjunction with Human Resource Management, the OIEC is a part of every search at UMES. The staff of OIEC vet each hiring committee – whether hiring faculty or staff – to ensure that the group is racially, ethnically, and gender balanced. Later in the hiring process, the OIEC office reviews the finalist candidates before they come for interviews to ensure that, to the extent possible, a diverse pool of candidates is being considered.

3. Commitment from each of the four schools to culturally diverse academic and community programming

Each program, major, and center works to highlight and invite programs, speakers, and community partners whose everyday work centers on cultural diversity and social equity. Such programs are not just for Black or Women's History Month, but the central work of the University.

These examples highlight aspects of one strategy used by UMES to maintain and increase the cultural diversity of our faculty and staff. Our campus actions underscore our words, making our campus community a place where diversity thrives – and so do our people.



April 22, 2020

University of Maryland Global Campus Efforts to Diversify Faculty and Staff

University of Maryland Global Campus (UMGC) has a robust recruitment strategy to ensure that we are consistently focusing on successful ways to increase the diversity of faculty and staff. Some of those strategies include partnerships with various organizations that specialize in working with diverse populations of people. Some of our current partnerships include:

- Getting Hired – Supports employment opportunities for veterans and people with disabilities.
- Military Spouse Employment Partnership (MSEP) – UMGC Talent Acquisition conducts weekly meetings with MSEP Advisor, we attend MSEP sponsored job fairs, post all of our vacancies on their employment database, and frequently post on MSEP social media sites.
- UMGC Career Services – We have found a great way for us to mirror our student population and focus on hiring diverse individuals is through a strong partnership with UMGC Career Services. In addition, we have similar relationships with other local colleges and universities throughout the state.
- Operation IMPACT Network of Champions: Diversity program focused on assisting severely wounded service members as they transition from military service to their next career opportunity. We participate in their quarterly virtual meetings and in other targeted workshops conducted by this organization.

In addition to strategic partnerships, we also remain focused on increased hiring activities through:

- Trainings and Workshops:
 - The Talent Acquisition team benefits from many trainings and workshops. Examples include: Diversity Recruitment Best Practices, Unconscious Bias, Creating an Inclusive Work Environment for Veterans, Creating an Inclusive Work Environment, Creating a Mental Health Friendly Work Environment. Also, UMGC Talent Acquisition uses Degreed, an online learning platform, to participate in self-paced trainings focused on best practices around diversity and inclusion.
- Job Fairs, Networking Events, and Community Service:
 - The UMGC Talent Acquisition team ensures we are casting a wide net by attending in-person and virtual career fairs, attending networking events and resume workshops, and participating in community service events
- Talent Sourcing:
 - Talent Acquisition can source people based on the diversity goals of hiring leaders. This includes targeting candidates based on their membership or affiliation with diverse organizations – fraternities/sororities, community groups, etc.

UMGC consistently hires more females than the national average and we also believe that our veteran hiring percentages are very high (10%+). The evidence that demonstrates the success of our partner strategy is based on not only these results, but based on the qualitative experience across the UMGC Community.

Blair H. Hayes, Ph.D. – UMGC VP, Chief Diversity Officer and Ombudsman



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

TOPIC: 2020-2021 EPSL Agenda Brainstorming

COMMITTEE: Education Policy and Student Life

DATE OF COMMITTEE MEETING: Tuesday, May 5, 2020

SUMMARY: The annual agenda for the committee on Education Policy and Student Life includes many standard reports, new academic program proposals, and other anticipated action and information items. As we conclude the Committee's business this year and in preparation for next year, regents will hear about a few key anticipated topics of interest. Additionally, the regents have the opportunity to suggest the addition of items that may 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: Information Only

DATE: May 5, 2020

BOARD ACTION:

DATE:

SUBMITTED BY: Joann A. Boughman

jboughman@usmd.edu
