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

**Tuesday, May 15, 2018
9:30 a.m.**

**Towson University
University Union
Chesapeake Ballroom (3rd Floor)**

**Agenda
Public Session**

Action Items

1. New Academic Program Proposals
 - a. [Frostburg State University: Master of Medical Science in Physician Assistant Studies](#)
 - b. [Towson University: Master of Science in Actuarial Science and Predictive Analytics](#)
 - c. [Towson University: Master of Science in Transformational Educational Leadership](#)
 - d. [University of Maryland University College: Doctor of Business Administration](#)
2. [Report of the Regents' Workgroup on Civic Education and Civic Engagement](#)

Information Items

3. [William E. Kirwan Center for Academic Innovation Update](#)
4. [P-20 Overview and Update](#)
5. [2018-2019 Agenda Brainstorming](#)

Action Item

6. Motion to Adjourn



BOARD OF REGENTS

SUMMARY OF ITEM FOR ACTION,
INFORMATION, OR DISCUSSION

TOPIC: Frostburg State University: Master of Medical Science in Physician Assistant Studies

COMMITTEE: Education Policy and Student Life

DATE OF COMMITTEE MEETING: Tuesday, May 15, 2018

SUMMARY: Frostburg State University (FSU) proposes to offer the Master of Medical Science in Physician Assistant Studies (PAS) program in response to the growing state and national physician shortage, particularly in rural and medically underserved areas. In the western Maryland region served by FSU, the health care industry accounts for the largest employer in Garrett, Allegany and Washington Counties and the third largest employer in Frederick County. The proposed FSU PAS program is timely and most uniquely positioned to serve the escalating health care shortage in western Maryland.

The proposal new FSU PAS program is in recognition of the societal responsibility to address the regional and statewide workforce needs. As proposed, the FSU PAS program will especially address the unique needs of a complex and changing region to train PAs to work, live and serve in the rural and medically underserved areas found in western Maryland.

The FSU PAS program will be housed at the University System of Maryland Regional Education Center at Hagerstown (USMH) and is expected to enroll 25 students in a cohort each year. The proposed program will improve access to health care in the region and will produce qualified graduates who will live and work in the communities they serve, contributing significantly to the economic well-being and vitality of the state and region.

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

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

CHANCELLOR’S RECOMMENDATION: That the Education Policy and Student Life Committee recommend that the Board of Regents approve the proposal from Frostburg State University to offer the Master of Medical Science in Physician Assistant Studies.

COMMITTEE RECOMMENDATION: DATE: May 15, 2018

BOARD ACTION: DATE:

SUBMITTED BY: Joann A. Boughman 301-445-1992 jboughman@usmd.edu

Maryland Higher Education Academic Program Proposal

PROPOSAL FOR:

- NEW INSTRUCTIONAL PROGRAM**
 SUBSTANTIAL EXPANSION/MAJOR MODIFICATION
 COOPERATIVE DEGREE PROGRAM
 WITHIN EXISTING RESOURCES or **REQUIRING NEW RESOURCES**

(For each proposed program, attach a separate cover page. For example, two cover pages would accompany a proposal for a degree program and a certificate program.)

Frostburg State University

Institution Submitting
Proposal

Summer 2019

Projected
Implementation Date

**Master of Medical Science
in Physician Assistant
Studies**

Award to be Offered

Physician Assistant Studies

Title of Proposed Program

Suggested HEGIS Code

29-1071

Suggested CIP Code

Department of Proposed Program

Beth Smolko

Name of Department Head

Beth Smolko

Contact Name

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Contact E-Mail Address

240-609-5826

Contact Phone Number

Signature and Date

President/Chief Executive Approval

Date

Date Endorsed/Approved by Governing Board

**Frostburg State University
New Program Proposal
Master of Medical Science in Physician Assistant Studies**

A. Centrality to institutional mission statement and planning priorities:

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

In response to a growing state and national physician shortage, particularly in rural and medically underserved areas, Frostburg State University (FSU) is proposing a new 24-month, 117-credit hour Physician Assistant Studies (PAS) program which will award graduates a Master of Medical Science in Physician Assistant Studies. This new master's program will begin in summer 2019, following the Accreditation Review Commission on Education for the Physician Assistant (ARC-PA) provisional accreditation approval which is expected in March 2019. The PAS program will be housed at the University System of Maryland Regional Education Center at Hagerstown (USMH) and is expected to admit 25 students each year in a cohort model.

Frostburg State University has provided pathways to success for students for well over a century. Founded in 1898 to prepare teachers, the University today is a public, comprehensive, co-educational institution offering a wide array of programs at the undergraduate, graduate, and doctoral levels. As the only constituent USM institution west of the Baltimore-Washington corridor, it serves as the premier educational and cultural center for western Maryland. FSU fulfills a unique role in public and community service in the region and has the distinction of offering academic programs to meet the needs of both students and employers of the state, in particular those in the western Maryland region and surrounding areas.

Within FSU's regional service area, the health care industry accounts for the largest employer in the three most western counties in Maryland (Garrett, Allegany and Washington County) and is the third largest employer in Frederick County, Maryland (<http://commerce.maryland.gov/>). FSU is committed to growing programs which will meet the needs of these employers. As part of the overall strategic plan of the institution to meet workforce demands in the health care industry, the university has focused in recent years on development of health science programs. Since 2010, FSU has developed and implemented a Health Science major, RN to BSN program, and Master of Science in Nursing with concentrations in Education and Administration. Recently, FSU was also approved to offer a Master of Science in Nursing with concentrations in Family Nurse Practitioner and Psychiatric and Mental Health Nurse Practitioner to begin fall 2018.

This proposal for a new Physician Assistant (PA) program is in direct alignment with the institution's mission stated below and in recognition of its societal responsibility to address regional and statewide workforce needs and to prepare leaders in the State of Maryland through its academic programs. It particularly addresses the unique needs of a complex and changing society aligning with the new PAS program's mission to develop PAs to work, live

and serve in rural and medically underserved areas like those found in FSU's western Maryland region.

FSU Mission:

Frostburg State University is a student-centered teaching and learning institution featuring experiential opportunities. The University offers students a distinctive and distinguished baccalaureate education along with a select set of applied master's and doctoral programs. Frostburg serves regional and statewide economic and workforce development; promotes cultural enrichment, civic responsibility, and sustainability; and prepares future leaders to meet the challenges of a complex and changing global society.

Physician Assistant Studies Program Mission:

The Mission of the Frostburg State University's Physician Assistant Studies Program is to educate students in compassionate patient-centered care. Students will learn best practices using innovative technology and will work in interprofessional teams to provide access to quality care, particularly in rural and medically underserved areas in Maryland and beyond. Frostburg State University Physician Assistant Studies graduates will have a commitment to excellence, inclusivity, and community service.

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

FSU has recently completed a new strategic planning process which has resulted in redefined goals for the university. However, this process only solidified FSU's commitment to addressing the educational and workforce needs of the state and more specifically the western Maryland region.

This new Master of Medical Science in Physician Assistant Studies will be responsive to the following established university goals:

1. Expand Regional Outreach and Engagement:
 - Support economic development in western Maryland through targeted initiatives.
2. Align University Resources – Human, Fiscal, and Physical with Strategic Priorities.
 - Ensure academic programs meet student and workforce expectations.

In 2013, FSU was approached by local health care leaders to consider the development of a PA program to help address the growing health care provider shortage in the region. Since this time, FSU has been engaged in work that has led to the development of this program proposal including feasibility study development, meeting with local health care leaders, facility planning, clinical site identification and development, and various other aspects of program planning in addition to accreditation compliance. This due diligence required a five-year commitment from FSU due to the nature of the accreditation process required by ARC-PA, the accrediting body for Physician Assistant programs. In order to

be placed in the queue for accreditation review, FSU submitted a letter of intent nearly five years ago to secure an accreditation visit which is scheduled for October 2018. This five year wait time is a direct result of ARC-PA's stringent accreditation process and standards, coupled with the number of universities nationally who are in line for developing PA programs.

Despite the long process of securing an accreditation visit date, the identified cost and resources involved in beginning a PA program, and the various other challenges this program presents in the development phase, FSU has remained committed to this program as it clearly aligns with our vision, mission and goals in the following ways.

1. As the premier four year educational institution in the region, FSU has an obligation clearly stated in our mission to respond to state and regional educational needs. Currently, there are only two PA programs in the state of Maryland, both offered in the Baltimore/Washington area. Having a third PA program in Maryland will help address the growing shortage in health care providers across the state. More importantly, it will have a significant impact on the western Maryland region as our program will target and attract students who want to live, work and serve in rural and medically underserved areas like those found in western Maryland. Our adopted program mission statement is evidence of this commitment (see mission statement on page 3).
2. The proposed PAS program will not only improve access to health care in the region but will produce qualified graduates who will live and work in the communities they serve, contributing significantly to the economic well-being and vitality of the state and region.

BC 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.

As mentioned above, FSU's impetus for developing a PA program was a request made by health care leaders in the region and state to consider development of this program. In response to this request, FSU began a process of research and completion of a feasibility study. This included a review of the literature to determine state and national needs, a survey of regional health care providers including physicians, nurse practitioners and physician assistants to assess support for clinical site placements, and collection of physician shortage surveys completed by the regional health care systems which more clearly identified specific needs within the region.

A review of data from all of the above sources revealed that the problem of access to care at the national, state and regional level due to physician shortages was growing larger, and in particular impacting rural and medically underserved areas more significantly. The Association of American Medical Colleges estimates the country will need 40,800 to 104,900 new physicians by 2030 as a result of a growing and aging

population coupled with an aging physician population¹. In Maryland alone, it is expected that the need for practicing primary care physicians will increase 23% (1052 physicians) by 2030.² These shortages are expected to be more serious in areas where there are higher numbers of rural or underserved populations³.

The Health Resources and Services Administration (HRSA) completed a study in 2013 related to the pending physician shortages and indicated that an answer to the growing physician shortages may be an increase in Physician Assistants and Nurse Practitioners to fill the gap. The study indicated that the supply of Physician Assistants and Nurse Practitioners is projected to increase by 30 percent, which could decrease the primary care physician shortage anticipated in 2020 from 20,400 to 6,400.⁴ In 2015, the Maryland Rural Health Association (MRHA) also identified the development of a “rural workforce pipeline to assure an adequate network of providers in rural areas” as one of their top priorities to combat the growing healthcare workforce shortage in rural areas. One specific goal noted was to develop “creative and innovative approaches to increasing the supply of rural homegrown students interested; prepared; and supported through their training for healthcare careers”. FSU’s PAS program is a pipeline program to help address the gap in the state of Maryland, most particularly in the region as our goal is to recruit students who want to live and work in rural and underserved areas like those found in the western Maryland region.

Additional support for the documented need for a PA program which aims to attract students who want to live and work in rural or medically underserved areas in Maryland is noted by the amount of rural and medically underserved areas in Maryland. Maryland Area Health Education Center reports that “18 of Maryland's 24 county jurisdictions (all but Anne Arundel, Baltimore, Howard, Montgomery, Prince George's counties and Baltimore City) meet Maryland State designation as rural and 10 rural counties have partial or full designations as primary health care professional shortage areas. All of the 10 of the state’s counties and all federally designated rural areas are located in the western or eastern parts of the state. According to the most recent report of the Maryland Health Regulatory Commission, Maryland's rural communities differ greatly from the urban counties; specifically, they have fewer healthcare providers, higher rates of chronic disease and mortality, significant disparity of socioeconomic characteristics and low levels of health literacy”.⁵

Additionally, a study commissioned by the Maryland Hospital Association (MHA) in 2008 also found that Maryland was projected to be 16% below the national average for the number of physicians available for clinical practice and that Southern Maryland, western Maryland and the Eastern Shore were the most affected by this shortage. According to the report, Southern Maryland has a critical shortage in 25 of the 30 physician categories (83.3%), western Maryland 20 of 30 (66.7%), and the Eastern Shore 18 of 30 (60.0%)⁶.

¹ Association of American Medical Colleges, 2017 Update: The Complexities of Physician Supply and Demand: Projections from 2015 to 2030. February 28, 2017.

² The Robert Graham Center. Policy Studies in Family Medicine and Primary Care, (n.d.).

³ Association of American Medical Colleges, 2017 Update: The Complexities of Physician Supply and Demand: Projections from 2015 to 2030. February 28, 2017.

⁴ Health Resources and Services Administration. Projecting the Supply and Demand for Primary Care Practitioners Through 2020.

⁵ Maryland Area Health Education Center. Health Care Disparities in Maryland (n.d).

<http://www.medschool.umaryland.edu/mahec/Health-Disparities/Health-Care-Disparities-in-Maryland/>

⁶ Maryland Hospital Association and The Maryland State Medical Society, Maryland Physician Workforce Study, Prepared by Boucher and Associates. January 2008.

While MHA’s original report had not been updated based on our review of the existing research, data collected from hospitals within the western Maryland region (Frederick Regional Health System, Meritus Health and Western Maryland Health System) provided further evidence of these anticipated ongoing physician shortages. Each of the three counties’ (Allegany, Washington and Frederick County) physician manpower shortage studies show that physician shortages will continue to strain the health system and limit access to care, particularly for those most at risk. Based on the individual manpower studies conducted by the individual health systems there was an expected shortage of 231 positions by 2016/2017, 86 of which are in the area of primary care⁷. (See table 1)

Table 1. Anticipated County Physician Shortage through 2017

	County	Manpower Study Completed	Projected Through	Total	Total Primary Care**
Frederick Regional Health System	Frederick County*	2012	2017	42	13
Western Maryland Health System	Allegany	2014	2017	69	26
Meritus Health	Washington	2011	2016	46	28
Garrett	Garrett	2014	?	74	15 (19 with pediatrics)

* Projections Do Not Consider Secondary Service Areas Outside of the County

** Primary Care does not include OB/GYN.

Meritus Health’s most recent physician manpower study showed the problem has only worsened. They are anticipating a shortage of 164.5 physicians by 2019.⁸

As part of FSU’s due diligence, it was important to survey the support from the medical community for this program. To that end, FSU conducted a survey of physicians, nurse practitioners and physician assistants in the four county western Maryland region. This survey showed overwhelming support for the program. Seven hundred and thirteen surveys were sent and 122 were completed (17% response rate). Seventy percent (70%) of physicians responding to the survey said they felt there was a need for the PA program. Fifty eight percent (58%) of physicians responding to the survey who have never or currently did not employ PAs in their offices said they would consider employing PAs in the future. Twenty five percent (25%) of physician responding to the survey said they had a current opening in their practice to employ a PA. Most encouraging was the response to the question of how they would support the PA program. Sixty one percent (61%) of respondents said they would serve a clinical preceptor and 26% said they would be interested in teaching in the program, Forty-three percent (43%) would guest lecture and 21% would serve on committees or advisory boards.⁹

Equally as supportive were the advance practice providers (PAs and NPs) in the western Maryland region. Sixty eight percent (68%) of respondents agreed that there was a need for a PA program in western Maryland. Eight-two percent (82%) said they would

⁷ Physician Manpower Shortage Studies from Western Maryland Health System (2014), Frederick Regional Health System (2012) and Meritus Health (2011)

⁸ Meritus Health Provider Development Plan, 2016.

⁹ FSU Physician Survey Data, 2014

participate as a clinical preceptor, 52% would like to teach in the program, 100% said they would consider guest lecturing, 48% would serve on a planning or advisory committee.¹⁰

Overall, the review of the literature and data indicate both a need for a PA program that attracts students who want to live and work in rural and underserved areas and FSU's program would be well supported by the medical community in a variety of ways from clinical site placement to teaching and advisory support.

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

This program will address the new 2017-2021 Maryland State Plan for Postsecondary Education **Goal 3: Foster innovation in all aspects of Maryland higher education to improve access and student success. Particularly, it will address the following Strategies:**

Strategy 8: Develop new partnerships between colleges and businesses to support workforce development and improve workforce readiness.

As previously mentioned, the development of the program was in direct response to a request made by local health care leaders in response to the physician shortage that is growing more serious. To date, this partnership has strengthened as evidenced by Meritus Health's generosity to provide and renovate the facility which will house the program. USMH, has also been able to garner significant support in terms of fundraising and grants to help cover some of the cost of renovation and equipment needed for the program (see section K and Appendix B for more information on this support).

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

Table 2 below demonstrates the State's potential demand for Physician Assistants in Maryland. This evidence of projected demand is based upon the program's Classification of Program (CIP) code of 29-1071. These projections have been cross-referenced with the Bureau of Labor Statistics Standard Occupational Codes (SOC) 51-0912.

This data is evidence that there is potential for 1,200 new positions between 2014 and 2024 or an average of 120 new Physician Assistant positions each year in Maryland.

¹⁰ FSU Advanced Provider Survey Data, 2014

Table 2: Maryland Occupational Outlook 2014-2024 for Physician Assistant

Physician Assistant	2014	2024	Change	% Change
	3,764	4,964	1,200	31.88%

Note: Source Maryland Department of Labor and Licensing
 (<https://www.dllr.state.md.us/lmi/iandoproj/maryland.shtml>)

FSU's PAS program is expected to result in an enrollment of 25 students in a cohort each year.

Physician shortage surveys completed by the three most western counties (Allegany, Garrett and Washington counties) also indicate looming physician shortages (See table 1 above). FSU's PAS program will have a direct impact on this shortage as the goal of the program is to attract students who are committed to working, living and serving in rural and medically underserved areas like those found in western Maryland. Additionally, the admission requirements are designed to provide preference to students who live in the FSU service region as research indicates students who are residents of rural and medically underserved areas are more likely to live and work in the area.

D. Reasonableness of program duplication

There are currently only two Physician Assistant programs in Maryland, both are community college/university partnerships – Anne Arundel Community College/University of Maryland Baltimore and Community College of Baltimore County/Towson. FSU's program will be the third to be offered in the state if approved.

While all three programs will provide the requisite training and education for Physician Assistant preparation, the difference in the three programs lies within our missions and program model.

The two existing programs have a long history of PA education which originated from a community college. Over the years in response to ARC-PAs requirement of master's degree level, the community college/university partnership model was developed to meet this need. This model has worked well for these two programs and has assured that the strengths, experience and rich history of quality PA education via a community college model was maintained while working collaboratively with universities to leverage their strength in graduate level education to meet the accreditation requirements. These two programs are among the few community college/university partnership programs remaining across the country in PA education, which speaks volumes about the programs' quality and effectiveness.

However, due to the current requirements of ARC-PA which requires all new programs to be sponsored by master's degree granting institution, FSU will not use a community college/university partnership model but will be the sole sponsoring institution providing the entire program at the graduate level.

A second and significant difference among the three programs is our vision and mission. While all three programs seek to prepare PAs to meet the needs of diverse populations,

FSU is specifically focused on attracting students who want to live and work in rural or medically underserved areas, particularly in western Maryland. Research has shown that programs which target rural and medically underserved areas are best able to meet this mission via their recruitment practices which target qualified students from within rural and medically underserved communities. According to the Rural Health Research Center, PA programs which include addressing rural health care in their mission and those which are located in rural areas are more likely to produce higher proportions of rural PAs.¹¹ Therefore, FSU has adopted a mission to include rural and medically unserved health care and has designed the program from admissions to curriculum to assure success in meeting this mission.

Table 3 provides a summary of a review of the MHEC degree file which provides information in terms of the number of graduates that are generated by current Maryland PA programs.

Table 3: Degree Trends in Maryland PA programs

	2012	2013	2014	2015	2016
Towson/CCBC	26	30	34	32	36
Anne Arundel/UMB	36	35	35	37	32

Note: Source MHEC degree trend data (https://data.mhec.state.md.us/mac_Trend.asp)

A review of this data indicates that there were 68 graduates in 2016 from the two existing PA program in Maryland. When compared to the BLS projections on job growth which indicates that there will be an average of 120 new openings for PAs each year in Maryland, there is evidence that the supply of PA graduates will continue to fall short of the demand. This data supports the need for this new PA program in Maryland. In particular it supports programs like FSU that are aimed at serving the most vulnerable populations in the state - rural and medically underserved areas which typically experience more significant health care provider shortages.

The additional capacity generated by FSU’s proposed new PAS program will not eliminate the workforce gap projected for the number of PAs needed in Maryland, but it will certainly help fill this gap and will most importantly address some of the most vulnerable areas in Maryland where health care provider shortages are proven to be more critical.

E. Relevance to high demand programs at HBIs

There is not a PA program offered by any of the Historically Black Institutions (HBI’s) in the state of Maryland. Therefore, FSU’s proposed PAS program has no impact on the relevance to high demand programs at HBIs.

¹¹ Rural Health Research Center Policy Brief #154(February, 2016). *Which physician assistant programs produce rural PAs? A national study.*

F. Relevance to the identity of HBI

There is not a PA program offered by any of the Historically Black Institutions (HBI's) in the State of Maryland. Therefore, FSU's proposed PAS program has no impact on the relevance to the identity of HBIs.

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

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

In an effort to provide a curriculum which adequately prepares students with the relevant skills and knowledge necessary to meet the challenges of Physician Assistants and to meet the standards set forth by the accrediting body (ARC-PA), FSU is proposing a cohort model program encompassing 117 credit hours over a 24 month period. The program will begin in May, with year one (12 months) of didactic coursework followed by year two (12 months) of clinical site placement experience (SCPE). Each SCPE will be 4 weeks in duration. There will be 7 SCPEs in areas required by the ARC-PA standards and an additional 3 elective SCPEs to provide the student the opportunity for depth in the students' selected areas of practice. In keeping with the mission of the program, students will be required to complete 30% of the SCPE placements or 3 placements in rural or medically underserved areas or in placement sites which serve these populations. The curriculum for this program has been carefully planned to align with the program mission and the ARC-PA accreditation requirements.

Admission Requirements:

- Bachelor's degree from an accredited university with a minimum of 3.0GPA on a 4.0 scale
- Science prerequisite GPA of 3.0 GPA or greater (see science prerequisites below)
- GRE or MCAT required. No minimum score required. GRE score of 300 is competitive. MCAT490 score is competitive
- Minimum Physician Assistant shadow experience 8 hours
- Minimum contact/health care experience 500 hours
- Essay/Personal Statement
- 2 Letters of Recommendation
- Completion of Prerequisite Courses: All but one prerequisite must be completed before January 2 prior to the admission year. This excludes Anatomy and Physiology as these courses must be completed for application review.
 - General Biology I and II – may be completed as AP courses in high school with score of 4 or 5 on AP exam
 - Anatomy and Physiology I and II with lab
 - Microbiology with lab
 - Medical Terminology

- General Chemistry I and II – may be completed as AP courses in high school with score of 4 or 5 on AP exam; also blended General Chemistry courses will be considered depending on course description
- Organic Chemistry I
- Psychology 101 (or similar entry-level psychiatry course) - may be completed as AP courses in high school with score of 4 or 5 on AP exam
- Introduction to Statistics - may be completed as AP courses in high school with score of 4 or 5 on AP exam
- Recommended but not required – Genetics, Physics, Biochemistry I Lifespan and Developmental Psychology or Developmental Psychology
- Interview

Once selected for an interview, FSU will use a Holistic Admissions process to include required criteria and preferred but not required criteria to include various metrics, attributes and experiences such as:

- Current resident of Washington, Allegany, Frederick, or Garrett county and regional service area of FSU
- Current resident of rural or medically underserved area as defined by the program
- Graduated from a high school or undergraduate institution within the identified contiguous county region (100 mile radius)
- Evidence of commitment to the programs mission of working or serving in a rural or medically underserved area
- Experiences and backgrounds in areas such as leadership, community services, military experience, language fluency and other life experiences.

Proposed Curriculum and Course Sequence

117 credit hours

Summer I	Credits
Human Anatomy I	2
Developing the PA Professional I	3
Clinical Medicine I	3
Basic Science I	3
Patient Assessment and Diagnostic Methods I	3
Pharmacology I	3
Population Health	2
TOTAL	19

Summer II	Credits
Foundations of Surgery	2
Emergency Medicine Intensive	3
Transition to Clinical Practice	1
SCPE 1	4
SCPE 2	4
TOTAL	14

Fall I	Credits
Human Anatomy II	2
Developing the PA Professional II	2
Clinical Medicine II	6
Basic Science II	4
Patient Assessment and Diagnostic Methods II	4
Pharmacology II	3
Research and Evidence Based Medicine	2
TOTAL	23

Fall II	Credits
SCPE 3	4
SCPE 4	4
SCPE 5	4
SCPE 6	4
TOTAL	16

Winter I	Credits
Geriatrics	2
Pediatrics	2
Functional and Preventive Medicine	1
TOTAL	5

Winter II	Credits
SCPE 7 (Elective)	3
TOTAL	3

Spring I	Credits
Human Anatomy III	2
Developing the PA Professional III	2
Clinical Medicine III	6
Basic Sciences III	4
Patient Assessment and Diagnostic Methods III	4
Pharmacology III	3
TOTAL	21

Spring II	Credits
SCPE 8	4
Capstone	4
SCPE 9	4
SCPE 10	4
TOTAL	16

Course Descriptions

Due to the number and length of course descriptions, a list of courses with descriptions can be found in Appendix A

Description of Objectives and Learning Outcomes

Frostburg State University assures that the Physician Assistant Studies program’s mission, vision and goals have been designed to align with the institutions mission and goals. The learning objectives have been guided by the Competencies for the Physician Assistant Profession which is published by the National Commission on Certification of Physician Assistants. These learning goals will be mapped to the program goals and the graduate learning goals for the institution.

Physician Assistant Studies Program Vision

Frostburg State University Physician Assistant Studies program will educate a Physician Assistant workforce committed to excellence, compassion, and patient-centered care to serve rural and medically underserved regions in Maryland.

Physician Assistant Studies Program Mission

The Mission of the Frostburg State University's Physician Assistant Studies Program is to educate students in compassionate patient-centered care. Students will learn best practices, use innovative technology, and work in inter-professional teams to deliver quality care, particularly in rural and medically underserved areas in Maryland and beyond. Frostburg State University Physician Assistant Studies graduates will have a commitment to excellence, inclusivity, and community service.

Program Goals:

Goal 1: Prepare Physician Assistant students with the core medical knowledge and skills to deliver quality healthcare, achieving first time PANCE scores at or above the national average and aggregate scores at 100%.

Goal 2: Prepare students in the use of technology and through inter-professional education opportunities to improve access to care and physical exam and diagnostic skills in all clinical setting.

Goal 3: Prepare graduates to evaluate clinical data and research and make evidence based decisions to provide safe, quality care for all patients.

Goal 4: Prepare graduates to meet the healthcare needs of rural and medically underserved populations.

Learning Outcomes/Competencies

Upon completion of the FSU PAS Program, graduates are expected to be competent in the following areas with an emphasis on rural and medically underserved populations:

Medical Knowledge

MK1 Demonstrate an understanding for the medical, behavioral and social knowledge necessary to evaluate and manage patients across all ages and patient populations in both primary care and specialty settings.

Interpersonal Skills and Communication:

- IPSC1 Elicit an accurate medical history from patients.
- IPSC2 Perform a detailed physical exam relevant to the medical history.
- IPSC3 Document a clinical encounter in the patient record.
- IPSC4 Deliver accurate patient education that encompasses verbal, non-verbal and written forms of information to the patient and their care team that considers disease prevention and health awareness.

- IPSC5 Provide an oral presentation of a clinical encounter.
- IPSC6 Give or receive a patient handover to transition care responsibly.

Clinical Problem Solving:

- CPS1 Demonstrate an ability to formulate a differential diagnosis following a clinical encounter.
- CPS2 Demonstrate an ability to recommend and interpret appropriate diagnostic studies to assist in the evaluation and treatment of the patient.
- CPS3 Demonstrate the ability to develop and implement an appropriate therapeutic management plan, either pharmacological or non-pharmacological, based on the patient's medical history, physical exam and diagnostic study findings.
- CPS4 Recognize a patient requiring urgent or emergent care, and initiate evaluation and management.
- CPS5 Demonstrate an ability to make informed decisions about the care of patients consistent with up-to-date scientific evidence, patient preferences, and sound clinical judgment.
- CPS6 Identify system failures and contribute to a culture of safety and improvement.

Technical Skills:

- TS1 Demonstrate the ability to obtain informed consent and perform clinical procedures common to primary care to include: venipuncture, intravenous access, joint injections and aspirations, wound management, laceration repair, casting and splinting, strep screening, urinalysis, catheterization, performing pelvic exams, and interpretation of radiographic images, pulmonary function tests and ECGs.
- TS2 Effectively utilize telemedicine equipment and demonstrate the ability to discern conditions that are appropriate for treatment using telemedicine/telepsychiatry.

Professionalism:

- PROF1 Demonstrate professionalism with high ethical principles, sensitivity, and responsiveness to all patients, their care teams, and members of the healthcare team.

H. Adequacy of articulation – Not applicable

I. Adequacy of faculty resources

The following positions are needed for this program and are required by ARC-PA accreditation standards to be considered adequate for a program designed to admit 25 students per year. The President and Provost of the university have approved and confirmed their support for this staffing plan.

- 1 FTE Program Director
- 1 FTE Academic Coordinator who will also have teaching responsibility
- 1 FTE Curriculum Coordinator who will also have teaching responsibility
- 1 FTE Instructional Faculty (Starting July – September 2018 prior to October site visit)
- 1FTE Instructional Faculty (Starting Spring 2019 prior to second admitted cohort)

1 FTE Clinical Coordination Support/Lab Manager
1 FTE Administrative Assistant
.2 FTE Medical Director (Contractual)
.2 FTE Pharmacist (Contractual)
Adjunct Instructors and Guest Lecturers (equivalent 5 courses per year)

In July 2017, FSU hired a full time Program Director to complete the planning and development of the program. The Program Director, Beth Smolko, is a certified Physician Assistant with significant experience in internal medicine, particularly serving underserved populations, and occupational health. She also has held leadership roles in the PA profession as a member of the Board of the American Academy of Physician Assistants and Association of Family Practice Physician Assistants. She is currently a candidate in the Doctor of Medical Science program at Lynchburg College.

Doug Brown is joining FSU on March 14, 2018 as the Clinical Coordinator. Doug is a certified Physician Assistant with extensive experience in emergency medicine. He has served in a clinical preceptor roles and as an adjunct instructor and holds a Master of Science Physician Assistant Studies.

The Academic Coordinator position has been posted and a search is currently underway with the goal of hire before October 2018. A third principal faculty member is scheduled to join FSU in prior to October 2018 and a fourth faculty will be hired in Spring 2019 prior to the admission of the second cohort.

As required by the ARC-PA standards for accreditation, all faculty and staff required to begin the program must be hired and on board before the start of the program and must be appropriately credentialed.

All full-time tenure track faculty will be both academically and experientially qualified to instruct at the graduate level and will hold terminal degrees (Master of Science in Physician Assistant Studies or equivalent) in the field. Adjunct faculty will have the expertise in their fields and appropriate credentials for their area of assigned teaching. These faculty members have been identified in Table 4.

Table 4. Plan for Faculty Resources for the Master of Medical Science in PA Studies

Faculty Name	Appointment Type	Terminal Degree	Academic Rank	Status	Course Options for Assignments
Program Director, Beth Smolko	Tenure Track	Master of Science Medical Science. Currently completing Doctor of XXX. Expected completion date XXXX		Full-time –	DPAM 631, 632,633,670
Clinical Coordinator -	Tenure Track	Master of Physician Assistant Studies or equivalent		Full-time	DPAM 642, 643,690,695, 700-709
Academic Coordinator - New Faculty Hire, current in search process	Tenure Track	Master of Physician Assistant Studies or equivalent		Full-time	DPAM 610,611,612,665, 700-709
New Faculty Hire, start date July 2018	Tenure Track	Master of Physician Assistant Studies or equivalent		Full-time	DPAM 601,602,603,621,622,623 700-709
New Faculty Hire–start date January 2020	Tenure Track	Master of Physician Assistant Studies or equivalent		Full-time	DPAM 621,622,623, 680,685,700-709
Medical Director, currently in search process	Contractual	MD or DO		.2 FTE (contractual part time)	Guest Lecture 621,622,623, 695, 675,680
Pharmacist	Contractual	Doctor of Pharmacy		.2FTE (contractual part-time)	DPAM 652,653,654
Adjuncts –	Contractual	Master of Science in Physician Assistant Studies or equivalent		Adjunct as needed	DPAM 660, 675,680 – Guest in 621,622,623, 675,680

J. Adequacy of library resources

The Lewis J. Ort Library at FSU provides resources for the current health sciences program, particularly for the nursing programs implemented over the past several years. The library holds licensure for CINAHL Plus with Full Text, HealthSource: Consumer

Edition, HealthSource: Nursing/Academic Edition, JSTOR Life Sciences Collection, MEDLINE/PubMed, Nursing & Allied Health Source, PsycARTICLES, and PsycINFO, all of which are appropriate resources for use in the PA program. Additionally, the library also subscribes to several multidisciplinary databases such as Academic Search Complete, Dissertations & Theses Global, LexisNexis Academic and Web of Science that contain articles related to medicine. Through the library, students also have online access to specialty journals pertinent to the PAS program that include, but are not limited to:

- Journal of the American Medical Association
- Journal of Family Practice
- Journal of the American Board of Family Medicine
- American Family Physician
- Family Practice Management
- Annals of Family Medicine
- Pediatrics
- American Journal of Psychiatry
- Journal of Clinical Psychology
- International Journal of Neuropsychopharmacology
- Brown University Psychopharmacology Update
- Brown University Child and Adolescent Psychopharmacology Update
- Journal of the American Academy of Child and Adolescent Psychiatry
- New England Journal of Medicine
- The Lancet

FSU has budgeted for and will add the following new resources to the above list pending program approval: AccessMedicine and UpToDate (See table 5 below). Also important to note, PAS students will be required as part of their coursework to purchase student memberships in national PA organizations, which will entitle them to a number of peer reviewed journals. The need for additional electronic journals will be considered on a yearly basis and will be discussed with the library supported by the revenue generated by enrollments.

Table 5. Estimated Cost of Additional Library Resources for Physician Assistant Studies Program

Product	Vendor	FY 2018 Cost	FY 2019 Cost	FY 2020 Cost	FY 2021 Cost	FY 2022 Cost	FY 2023 Cost	FY 2024 Cost
AccessMedicine	McGraw-Hill Education	\$4,716	\$5,046	\$5,399	\$5,777	\$6,182	\$6,614	\$7,077
UpToDate	Wolters Kluwer	\$16,355	\$18,000	\$18,725	\$20,036	\$21,438	\$22,939	\$24,544

The Library has access to over 60 electronic databases that include approximately 37,000 full-text journals, magazines, newspapers and e-books, and provide direct links to more than 50,000 additional open access periodicals. The OneSearch interface supporting the databases is accessible through the Internet and is available to all registered Library users from anywhere in the world on a 24 hour/7 day basis. The cooperative sharing program between University System of Maryland (USM) institutions provides students, faculty, and staff with borrowing privileges of circulating materials from any USM library, including the

University of Maryland at Baltimore's Health Sciences Library. Additionally, a RapidILL interlibrary loan service is available to provide expedited processing of research materials from other libraries.

Librarians also provide instruction and create video tutorials on how to use various services as well as how to access and effectively use the databases. In the event students need further assistance with accessing resources, they may call, email, or use a 24 hour/7 day chat service to connect with a reference librarian.

K. Adequacy of physical facilities, infrastructure, and instructional equipment

As part of the feasibility study, space requirements to operate the PA program space requirements for operation of this program were deemed to be significant and not available at the FSU campus. FSU began to identify other options for location of the program and was able to identify the University System of Maryland Regional Education Center located in Hagerstown, Maryland. FSU has several programs which operate out of this site both graduate and undergraduate. To accommodate this program at USMH, additional space was also required but we were able to easily identify additional space in a property called the Walnut Street building located within a block of the main USMH building owned by Meritus Health, the local hospital. The building once housed a federally qualified health center. USMH and Meritus Health have been strong partners and very supportive of the development of the PA program. Meritus has offered the third floor space of the Walnut Street building to USMH for the purpose of housing the PA program and has worked with USMH and FSU to renovate the space according to the specific program requirements. FSU had input to all aspects of the space planning, including architectural drawings, furnishing and equipment. However, all costs associated with the renovation and furnishing of this space are the responsibility of USMH. USMH has secured grants funds and private donations to pay for the cost of renovation and furniture for all office and instructional space on the third floor. The building HVAC infrastructure is also being replaced to meet the new facility design.

The PA program will be located on the third floor of the Meritus building located at 24 Walnut St. Hagerstown, MD, just one block from the main building of USMH. The third floor consists of 8,541 sq. feet. The following space has been planned to accommodate annual cohorts of 25 students, Program Director, Medical Director, 4 faculty, adjuncts and 2 full-time staff members. There is also space available on the 2nd floor for future expansion if needed. Below is a list of areas planned for the 3rd floor space.

- Lobby
- Reception
- Conference /Resource Center
- 7 Offices
- Faculty Conference and Seminar Room
- 2 Large classrooms
- Skills Lab
- Anatomy Lab
- 4 Patient Simulation Room with Observation Areas
- Storage
- Student Record Storage
- Restrooms (2 women's and 2 men's)
- Kitchen/Break Area

Each of the classrooms will be equipped with tables, chairs, large screen monitor and connected lectern and projection equipment. Skills lab and Simulation rooms will be furnished with appropriate exam tables, furnishing and recording equipment for simulation review. While this program will not have a traditional cadaver lab, we will have an Anatomy lab equipped with Interactive 3D Anatomy Dissection Table (Anatomage). To supplement anatomy instruction, FSU is also planning to enter into a contract with the Anatomy Gift Registry where students will visit and be afforded the opportunity to work with cadavers. Offices and reception area will be equipped with desks, chairs, file cabinets, computer and phones as appropriate. The building is equipped with an elevator and appropriate security systems with electronic key fob entry will also be in place.

USMH and Meritus will be responsible for facility management to include security, housekeeping, and technology support, while Meritus will be responsible for the maintenance of all building infrastructure including HVAC and outside areas to include parking. Instructional equipment and supplies will be provided by FSU.

Students in the PA program will have full access to library services at the FSU campus via the library portal. Additionally, students will have access to all USMH facilities, to include the library in the main building located at 32. W Washington St., a block away from the PA program building. Also, FSU has planned space for a small resource area for access to a small collection of text books and resources specific to the PAS program. Students and faculty will have full access to the FSU Learning Management System and 24/7 help desk support.

L. Adequacy of financial resources with documentation

Please note that FSU's President and Provost have committed necessary resources for the start-up phase of this program. In part, these costs will be covered by institutional reallocation of funds and PINS and operating budget in 1 and 2. Tuition revenue in years 3-5 will be sufficient to cover the costs for sustaining the program. Additionally, FSU is expecting a one-time amount of \$250,000 from USMH, via ARC grant and privately raised funds, to support the purchase of some of the clinical instruction equipment during Year 1 (FY 2019). FSU has also applied for and received preliminary approval for \$510,000 in enhancement funds. However, enhancements funds have not been confirmed at this time.

Please see budget tables 1 and 2 below for summary of projected revenue and expenses followed by narrative for this new program. Additional expense detail can also be found in Appendix C.

TABLE 1: RESOURCES

Grad-In State & Out of State Scenario	FY2019	FY2020	FY2021	FY2022	FY2023
Resource Categories	Year 1	Year 2	Year 3	Year 4	Year 5
1. Reallocated Funds	0	0	0	0	0
2. Tuition/Fee Revenue	290,930	1,179,225	1,917,475	1,971,295	2,027,455
(c + g below)					
a. Number of F/T Students	-	-	-	-	-
b. Annual Tuition/Fee Rate	-	-	-	-	-
c. Total F/T Revenue (a x b)	-	-	-	-	-
d. Number of P/T Students In-State (credit hour generated by 25 students)	285	1110	1755	1755	1755
d. Number of P/T Students Regional (credit hour generated by 25 students)	95	370	585	585	585
d. Number of P/T Students Out-of-State (credit hour generated by 25 students)	95	370	585	585	585
e. Credit Hour Rate In-State	516	531	547	563	580
e. Credit Hour Rate Regional	616	634	653	673	693
e. Credit Hour Rate Out-of-State	750	773	796	820	845
f. Total IS Revenue (d*e)	147,060	589,410	959,985	988,065	1,017,900
f. Total Regional Revenue (d*e)	58,520	234,580	382,005	393,705	405,405
f. Total OS Revenue (d*e)	71,250	286,010	465,660	479,700	494,325
g. Total P/T Revenue In & Out-of-State	276,830	1,110,000	1,807,650	1,861,470	1,917,630
(d x e x f)					
3. Grants, Contracts & Other External Sources	250,000				
4a. Technology Fees	7,600	33,600	53,200	53,200	53,200
4. Other Sources (course fees)	6,500	35,625	56,625	56,625	56,625
TOTAL (Add 1 – 4)	540,930	1,179,225	1,917,475	1,971,295	2,027,455

Please note that FSU has applied for and has received Resources Narrative

1. **Reallocated Funds- N/A**

2. **Tuition and Fee Revenue (line d+g)**

Assumptions used for this include:

- 25 students in the program each year taking 117 credit hours.
- The tuition schedule proposed for this program is: \$516 per credit hour in-state, \$616 per credit hour regional rate, and \$750 per credit hour out-of-state (non-regional) with a 3% increase annually.
- Based on the ramp up to full operation and a cohort model entering each year of a two year program, the following credit hours will be billed with the assumption that 60% will be IS , 20% Regional and 20% OS:
- Billed credit hours per year FY 19 – 475 ; FY20 - 1850; FY 2021 – 2925 ; FY 2022 – 2925; FY 2023 – 2925 . Please note that while these students will be attending full time, the budget is based on credit hour generation as graduate credit is not a per semester tuition/fee rate but rather a per credit hour tuition/fee rate. This is the reason that tuition is being identified in the budget table as P/T student. There is not a traditional full-time rate as graduate tuition is charged by the credit.
- Fees include technology fees @ \$16 per credit hour
- The multiplier of 25 students has been used as this is a cohort model which spans two years. At any given time there will be 25 students enrolled in 117 credit hours per year.

3. **Grants and Contracts**

FSU has developed a partnership with University System of Maryland at Hagerstown (USMH) to deliver this program at the USMH location. In support of this program, USMH has secured grant funds from the Appalachian Regional Commission and has raised matching funds for this grant through private donations. \$250,000 of the grant and matching funds will be allocated to FSU to purchase required medical equipment and technology used for instruction. This is a one-time ARC grant and private donation for start-up capital expenses only. Any additional and or replacement equipment needs will be purchased/ sustained by tuition revenue. See attached letter Appendix B

4. **Other Sources**

Other fees associated with student needs such as course fees for end of rotations exams, A/P and Clinical Medicine course lab fees and ACLS/PALS/BLS certifications which are required. These fees will have associated expenses as they will be used to cover required certification, testing and training.

TABLE 2: EXPENDITURES

	FY2019	FY2020	FY2021	FY2022	FY2023
Expenditure Categories	Year 1	Year 2	Year 3	Year 4	Year 5
1. Faculty (b + c below)	634,500	759,195	781,971	805,430	829,594
a. # FTE	4	5	5	5	5
b. Total Salary	470,000	562,367	579,238	596,615	614,514
c. Total Benefits	164,500	196,828	202,733	208,815	215,080
2. Admin. Staff (b + c below)	109,350	112,631	116,010	119,490	123,074
a. # FTE	2	2	2	2	2
b. Total Salary	81,000	83,430	85,933	88,511	91,166
c. Total Benefits	28,350	29,201	30,077	30,979	31,908
3. Support Staff (b + c below)	50,727	80,840	95,439	97,137	98,885
a. # FTE					
b. Total Salary	47,000	74,900	88,427	90,000	91,620
c. Total Benefits	3,727	5,940	7,012	7,137	7,265
4. Equipment	607,800	-	8,000	58,800	9,680
5. Library	23,046	24,124	25,813	27,620	29,553
6. New or Renovated Space					
7. Other Expenses	179,350	187,710	206,721	198,007	202,645
8. Other Expenses/ Student	6,500	35,625	56,625	56,625	56,625
TOTAL (Add 1 – 7)	1,611,273	1,200,125	1,290,579	1,363,109	1,350,056

Surplus	(1,070,343)	(20,900)	626,896	608,186	677,399
			Total 5 yr Surplus		821,238

Expenditures Narrative

1. Faculty (FTE, Salary, Benefits)

Faculty Salary and benefits are budgeted for Program Director and 4 full-time faculty to include the Clinical Coordinator/faculty, Academic Coordinator/faculty, and a third full-time faculty in year 1. The fourth faculty member is not being hired until spring 2019 and therefore is reflected in the first year as only ¼ time.

A multiplier of .35 percent is used for benefits. All faculty positions are 12 months appointments.

2. Administrative Staff (FTE, Salary, Benefits)

Administrative staff includes a full-time Clinical Site Support/Lab Manager staff member and a full time Administrative Assistant. The benefits multiplier used is .35 percent.

3. Support Staff (FTE, Salary and Benefits)

Support staff includes .2 FTE contractual Medical Director and .2FTE contractual Pharmacist. The Medical Director will be full-time in FY19 while the Pharmacist contract will begin in Summer of the first cohort or ¼ of the year of FY 19. This also includes funds for adjunct and guest lecture equivalent to an average of 6-8 courses @ \$4,000 stipend in years 1 and 2 and \$4,500 in years 3,4,5.

4. Equipment

Equipment includes all capital equipment needs for the purposes of instruction. A full list of equipment and estimated cost can be found in Appendix C. Furniture for offices, classrooms and computers for staff are being provided by USMH and will not be an expense of FSU to begin this program.

5. Library

The program will require two new library resources at an estimated cost of \$23,046 in year 1. Year 2-5 reflect additional cost as a result of expected inflation.

6. New and/or Renovated Space

This program will be housed at USMH. There are no estimated additional facility space cost to FSU for this program.

7. Other Expenses

This line item includes cost for technology license maintenance, professional development, accreditation, medical supplies for instruction, office supplies, printing, marketing, postage, contracts for Anatomy gift registry and patient simulation experiences, annual travel, phones, faculty recruitment, accreditation consultant, miscellaneous expenses to include medical waste and clinical site development/support. A detailed list of expenses can be found in Appendix C.

8. Other Expenses/Student

Students will have expenses that will be required as part of the program which will be attached to various courses such as Lab fee expenses for Anatomy Gift Registry visits, Patient simulation fees for visits to contracted sim labs, Advanced Life Support/Pediatric Life Support certification, end of rotation exams and end of course exams provided by outside vendors. Students will be charged a fee for these items attached to the courses and expenses will be paid on behalf of the student by FSU.

M. Adequacy of provision for evaluation of program

At the institutional level, FSU's academic program review provides departments an opportunity to reflect upon and improve the quality of program offerings. The program review process occurs every seven years for each distinct undergraduate, graduate, and post-graduate program and is mandated by the USM Board of Regents.

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

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Additionally, 6-12 months prior to the matriculation of students, the Physician Assistant Studies Program is required to achieve "accreditation – provisional" status through the ARC-PA. The foundation of this accreditation is to "verify an institution's ability to begin a program in compliance with the Standards, and the program's readiness to matriculate students."

The program will then undergo a provisional monitoring site visit approximately six months prior to graduation of the first cohort, the purpose of which is to demonstrate that FSU is "delivering the program in compliance with the Standards and the continued ability to do so." The successful completion of this visit allows a program to maintain "accreditation-provisional" status.

The final provisional site visit occurs approximately 18-24 months after the second provisional monitoring visit. "This visit verifies the institution's and program's demonstration of compliance with the Standards including their ability to incorporate and report the findings of a robust self-assessment process as required by the ARC-PA". The institution must

demonstrate the ability to provide a clear and effective assessment and continuous improvement plan according to the Accreditation Standards for Physician Assistant Education Programs, promulgated by the Accreditation Review Commission for Physician Assistant Education (ARC-PA) standard C1.01: "The program must implement an ongoing program self-assessment process that is designed to document program effectiveness and foster program improvement."

This assessment plan is multifaceted and will be guided by the mission and goals of the PA program, ARC-PA accreditation standards and the *Competencies for the Physician Assistant Profession* document published by the National Commission on Certification of Physician Assistants which guides the student learning outcomes/competencies for the program. These learning outcomes are mapped throughout the curriculum and to the program goals and graduate learning goals for the institution. A successful site visit will result in "accreditation - continued" status for the program.

As part of maintaining a strong PA program which delivers quality education to students and reflects the Standards of ARC-PA, the program will provide annual data analysis which is submitted annually (and throughout the year as needed). If there are no major concerns during the third site visit and data analysis is performed annually, the program will be re-evaluated as part of a "validation visit" every 10 years with a formal self-study report submitted 2-3 years prior to the validation visit.

N. Consistency with the State's minority achievement gap goals

Frostburg State University affirms its commitment to a campus environment that values human diversity and respects individuals who represent that diversity. In this spirit, Frostburg State University is committed to a policy of equal opportunity and to the elimination of discrimination in both education and employment on the basis of race, color, national origin, ethnic background, gender, sexual orientation, age, genetic information, creed, political or religious opinion or affiliation, disability, veteran's status or marital status, in conformity with all pertinent Federal and State laws on non-discrimination and equal opportunity.¹²

The University System of Maryland has dedicated itself to improving higher education opportunities for minority students in Maryland, thus helping students take part in post-graduate education programs such as pursuit of Master of Medical Science in Physician Assistant Studies. This PAS program will meet the guidelines set by the State of Maryland in the following ways:

- The university will continue to identify and recruit minority students that are promising candidates;
- Faculty and administrators connected to the FSU program will continue to stress minority achievement and encourage minority students to achieve success in this program;
- The addition of the PA program in the western portion of the state will not only increase opportunities for minority students who live in the region to gain access to join a Physician Assistant program but will enable minority graduates of the program to have better opportunities for this career path, particularly in rural and underserved areas.

¹² From FSU's 'Diversity & Equal Opportunity' web link. <http://www.frostburg.edu/about/diverse/>

O. Relationship to low productivity programs identified by the Commission – N/A

P. If proposing a distance education program, please provide evidence of Principles of Good Practice

This program is not a distance education program and will be delivered in a traditional face-to-face delivery model.

Appendix A

Course List (Course Numbers, Titles, Catalog Descriptions, and Number of Credits) for the Physician Assistant Studies Program

DPAM 601 Human Anatomy I

2 cr.

This first course in a series of three courses is devoted to the study of human anatomy and will cover the topography, internal structures, and functions of general overview and then select body systems (Dermatology, HEENT, Infectious Disease, Hematology/Oncology, and Neurology). 1.5 hrs. lecture; 2.5 hrs. lab. Summer. *Prerequisite: Admission to DPAM program.*

DPAM 602 Human Anatomy II

2 cr.

This second course in a series of three courses devoted to the study of human anatomy and will cover the topography, internal structures, and functions of select body systems (Cardiovascular, Pulmonary, Gastrointestinal, Endocrine, and Oral Health). One hr. lecture; 2.0 hrs. Lab. Fall. *Prerequisite: DPAM 601.*

DPAM 603 Human Anatomy III

2 cr.

This third course in a series of three courses is devoted to the study of human anatomy and will cover the topography, internal structures, and functions of select body systems (Musculoskeletal, Neurology – review with focus on neuromuscular and neuropsychiatric structure and function, Genitourinary and Reproduction). One hr. lecture; two hrs. lab. Spring. *Prerequisites: DPAM 602.*

DPAM 610 Clinical Medicine I

3 cr.

This is the first course in a three-part series designed to provide an intensive study of human diseases and disorders using a lifespan approach in the areas of clinical medicine including epidemiology, etiology, clinical presentation, progression, therapeutic management (non-pharmacologic), prevention, laboratory medicine, imaging, and prognosis. Emphasis will be on disease processes common to primary care practices and the development of a differential diagnosis and plans based upon the patient's clinical presentation. Three hrs. lecture. Summer. *Prerequisite: Admission into DPAM program.*

DPAM 611 Clinical Medicine II

6 cr.

This is the second course in a three-part series designed to provide an intensive study of human diseases and disorders using a lifespan approach in the areas of clinical medicine including epidemiology, etiology, clinical presentation, progression, therapeutic management (non-pharmacologic), prevention, laboratory medicine, imaging, and prognosis. Emphasis will be on disease processes common to primary care practices and the development of a differential diagnosis and plans based upon the patient's clinical presentation. Six hrs. lecture. Fall. *Prerequisite: DPAM 610.*

DPAM 612 Clinical Medicine III

6 cr.

This is the third course in a three-part series designed to provide an intensive study of human diseases and disorders using a lifespan approach in the areas of clinical medicine including epidemiology, etiology, clinical presentation, progression, therapeutic management (non-pharmacologic), prevention,

laboratory medicine, imaging, and prognosis. Emphasis will be on disease processes common to primary care practices and the development of a differential diagnosis and plans based upon the patient's clinical presentation. Six hrs. lecture. Spring. *Prerequisites: DPAM 611.*

DPAM 621 Basic Sciences I

3 cr.

This is the first course in a three-part series devoted to basic concepts and principles that are essential to comprehending the fundamental mechanisms of human physiology at the cellular, tissue and organ levels; and, the requirements for the maintenance of homeostatic control and identification of pathology. This course lays the foundation for understanding the underlying principles of the etiology, management and prevention of human disease processes. Three hrs. lecture. Summer. *Prerequisite: Admission into DPAM program.*

DPAM 622 Basic Sciences II

4 cr.

This is the second course in a three-part series devoted to basic concepts and principles that are essential to comprehending the fundamental mechanisms of human physiology at the cellular, tissue and organ levels; and, the requirements for the maintenance of homeostatic control and identification of pathology. This course lays the foundation for understanding the underlying principles of the etiology, management and prevention of human disease processes. Four hrs. lecture. Fall. *Prerequisites: DPAM 621.*

DPAM 623 Basic Sciences III

4 cr.

This is the third course in a three-part series devoted to basic concepts and principles that are essential to comprehending the fundamental mechanisms of human physiology at the cellular, tissue and organ levels; and, the requirements for the maintenance of homeostatic control and identification of pathology. This course lays the foundation for understanding the underlying principles of the etiology, management and prevention of human disease processes. Four hrs. lecture. Spring. *Prerequisite: DPAM 622.*

DPAM 631 Developing the PA Professional I

3 cr.

This course is the first of three-part series designed to aid the student in the transition into the medical profession and serves as an introduction to professional issues. Three hrs. lecture. Summer. *Prerequisite: Admission into DPAM program.*

DPAM 632 Developing the PA Professional II

2 cr.

This course is the second of three-part series designed to aid the student in the transition into the medical profession and serves as an introduction to professional issues. Two hrs. lecture. Fall. *Prerequisite: DPAM 631.*

DPAM 633 Developing the PA Professional III

2 cr.

This course is the third of three-part series designed to aid the student in the transition into the medical profession and serves as an introduction to professional issues. Two hrs. lecture. Spring. *Prerequisite: DPAM 632.*

DPAM 641 Patient Assessment and Diagnostic Methods I

3 cr.

This first course in a series of three will introduce students to history taking, physical examination, patient counseling and education techniques. Emphasis on learning the components of a complete physical exam and select body system specialty exams. One hr. lecture; two hrs. lab. Summer.

Prerequisites: Admission into DPAM program.

DPAM 642 Patient Assessment and Diagnostic Methods II

4 cr.

This second course in a series of three will continue to build on the student's ability to take an accurate medical history, physical examination, patient counseling and education techniques. Emphasis on learning the components of a Cardiology, Pulmonology, Endocrinology and Oral Health. One hr. lecture; three hrs. lab. Fall. *Prerequisites: DPAM 641.*

DPAM 643 Patient Assessment and Diagnostic Methods III

4 cr.

This third course in a series of three will continue to build on the student's ability to take an accurate medical history, physical examination, patient counseling and education techniques. Emphasis on learning the components of a Musculoskeletal, Psychiatric/Addiction Medicine, Women's Health and Genitourinary exam. One hr. lecture; three hrs. lab. Spring. *Prerequisites: DPAM 642.*

DPAM 651 Pharmacology I

3 cr.

This is the first course of a three-part series which explores medication delivery, its impact on the body and how it is eliminated. Topics focus on how medications work and potential benefit and risk on the human body. Special emphasis will be placed drugs used in Dermatology, HEENT, Infectious Disease, Hematology/Oncology and Neurology. Three hrs. lecture. Summer. *Prerequisites: Admission into DPAM program.*

DPAM 652 Pharmacology II

3 cr.

This is the second course of a three-part series which explores medication delivery, its impact on the body and how it is eliminated. Topics focus on how medications work and potential benefit and risk on the human body. Special emphasis will be placed drugs used in Cardiology, Pulmonology, Oral Health, Gastroenterology, and Endocrinology. Three hrs. lecture. Fall. *Prerequisites: DPAM 651.*

DPAM 653 Pharmacology III

3 cr.

This is the third course of a three-part series which explores medication delivery, its impact on the body and how it is eliminated. Topics focus on how medications work and potential benefit and risk on the human body. Special emphasis will be placed drugs used in Musculoskeletal System, Psychiatry and Addiction Medicine, Women's Health, and the Genitourinary System. Three hrs. lecture. Spring. *Prerequisite: DPAM 652.*

DPAM 660 Population Health

2 cr.

This course is designed with an emphasis on social, cultural, emotional and psychological factors affecting patient care and human relationships including social determinants of health and on the PA role in disease prevention (for individual and society) rather than treatment. Two hrs. lecture. Summer. *Prerequisite: Admission into DPAM program.*

DPAM 665 Research and Evidence-Based Medicine

2 cr.

The course is designed to teach the importance of evidence-based medicine and review basic statistics, research methods, and ethical standards in research. Two hrs. lecture. Fall. *Prerequisite: Admission to DPAM program.*

DPAM 670 Functional and Preventive Medicine

1 cr.

The functional and preventive medicine course focuses on the PA role in disease prevention (for individual and society) rather than treatment. This course will introduce students to strategies that promote health and wellness to include self-monitoring of health risk behavior, goal setting, and behavior changes. One hr. lecture. Intersession. *Prerequisite: DPAM 660.*

DPAM 675 Geriatrics

2 cr.

This course focuses on healthcare delivery and issues specific to care of elderly patients. Emphasis will be on disease processes, psychosocial aspects of care and creation of treatment plans pertinent to geriatric populations. Two hrs. lecture. Intersession. *Prerequisites: DPAM 610 Clinical Medicine I and DPAM 611.*

DPAM 680 Pediatrics

2 cr.

This course focuses on healthcare delivery and issues specific to care of the pediatric patient. Emphasis will be on routine preventive care, infant and childhood development, and disease processes common to pediatric practice. Two hrs. lecture. Intersession. *Prerequisites: DPAM 610 Clinical Medicine I and DPAM 611.*

DPAM 685 Foundations of Surgery

2 cr.

This course covers concepts of surgical assessment, basic surgical skills and procedures, surgical complications, and management of surgical patients. One hr. lecture; one hr. lab. Summer. *Prerequisite: Admission to DPAM program.*

DPAM 690 Emergency Medicine Intensive

3 cr.

This course prepares students to recognize, rapidly assess, and effectively manage emergent situation, illness, or injury. Team-based activities are used to encourage the development of teamwork, collaboration, and interdisciplinary value. Basic Life Support, Advanced Cardiac Life Support, and Pediatric Advanced Life Support training is part of this course. One hr. lecture; two hrs. lab. Summer. *Prerequisites: DPAM 612 and DPAM 643.*

DPAM 695 Transition to Clinical Practice

1 cr.

The purpose of this course is to: (1) provide the student with a time of self-assessment, (2) evaluate the student's knowledge, skills, and attitude, and (3) identify the student's level of preparedness using physical exam testing, technical skills assessment, and a written examination. Students must pass each of the three testing areas prior to the start of SCPE rotations. Supervised Clinical Practice Experience (SCPE) expectations and behavior will be discussed. One hr. integrated lecture/lab. Summer. *Prerequisites: DPAM 633 and DPAM 643.*

DPAM 700 Family Medicine: Supervised Clinical Practice Experience **4 cr.**

The 4-week long Family Medicine Supervised Clinical Practice Experience (SCPE) will enable students to meet program expectations and acquire the competencies needed for clinical PA practice. SCPE encounters will include patient care related to acute, chronic, and preventive medical needs associated with adult and elderly patients in a rural/underserved setting. Practicum. Variable. *Prerequisites: Completion of all pre-clinical course work.*

DPAM 701 Internal Medicine: Supervised Clinical Practice Experience **4 cr.**

The 4-week long Internal Medicine Supervised Clinical Practice Experiences (SCPE) will enable students to meet program expectations and acquire the competencies needed for clinical PA practice. SCPE encounters will include patient care related to acute, chronic, and preventive medical need associated with the adult and elderly population. Practicum. Variable. *Prerequisites: Completion of all pre-clinical course work.*

DPAM 702 Pediatrics: Supervised Clinical Practice Experience **4 cr.**

The 4-week long Pediatric Medicine Supervised Clinical Practice Experiences (SCPE) will enable students to meet program expectations and acquire the competencies needed for clinical PA practice. SCPE encounters will include patient care related to acute, chronic, and preventive medical needs associated with infants, children and adolescents in the pediatric setting. Practicum. Variable. *Prerequisites: Completion of all pre-clinical course work.*

DPAM 703 General Surgery: Supervised Clinical Practice Experience **4 cr.**

The 4-week long General Surgery Supervised Clinical Practice Experiences (SCPE) will enable students to meet program expectations and acquire the competencies needed for clinical PA practice. SCPE encounters will include patient care related to acute, and chronic, and medical need associated with pre-operative, intra-operative, and post-operative surgical management. Practicum. Variable. *Prerequisites: Completion of all pre-clinical course work.*

DPAM 704 Psychiatry: Supervised Clinical Practice Experience **4 cr.**

The 4-week long Psychiatric Medicine Supervised Clinical Practice Experiences (SCPE) will enable students to meet program expectations and acquire the competencies needed for clinical PA practice. SCPE encounters will include patient care related to acute and chronic, and medical needs associated with psychiatry patients. Practicum. Variable. *Prerequisites: Completion of all pre-clinical course work.*

DPAM 705 Women's Health: Supervised Clinical Practice Experience **4 cr.**

The 4-week long Prenatal and Gynecology Supervised Clinical Practice Experiences (SCPE) will enable students to meet program expectations and acquire the competencies needed for clinical PA practice. SCPE encounters will include patient care related to acute, chronic, and preventive medical need associated with women's health to include prenatal and gynecological care. Practicum. Variable. *Prerequisites: Completion of all pre-clinical course work.*

DPAM706 Emergency Medicine: Supervised Clinical Practical Experience **4 cr.**

The 4-week long Emergency Medicine Supervised Clinical Practice Experiences (SCPE) will enable students to meet program expectations and acquire the competencies needed for clinical PA practice. SCPE encounters will include patient care related to acute and emergent medical need associated with patients across the life span to include children, adolescents, adults, and elderly. Practicum. Variable. *Prerequisite: Successful completion of all pre-clinical course work.*

DPAM707 Elective: Supervised Clinical Practice Experience **1-4 cr.**

The elective (orthopedics, endocrinology, dermatology, cardiology, surgical specialty, etc.) Supervised Clinical Practice Experiences (SCPE) will enable students to meet program expectations and acquire the competencies needed for clinical PA practice. SCPE encounters will include patient care related to acute, chronic, and preventive medical need. This course is repeatable up to 12 credits. Practicum. Variable. *Prerequisites: Completion of all pre-clinical course work.*

DPAM709 Summative **4 cr.**

The summative evaluation measures mastery in the FSU DPAM graduate competencies and outcomes and associated ARC-PA Standards and NCCPA Blueprint items. Students will participate in a population health project in their community that will be identified and described by student teams. Students will work in teams to develop and execute a plan to address the community health care need. Finally, students will also engage in preparation for the PANCE exam, Curriculum Vitae creation, and preparation for job interviews. Four hrs. lecture. Spring. *Prerequisite: Admission to the DPAM program.*

Appendix B



Statement of USMH Support for

FSU Physician Assistant Studies Program

Under its mission-related obligation to provide facilities for programs accepted into the regional center, USMH shall provide classroom and laboratory space, and administrative and faculty office space, for the Physician Assistant Studies (PA) program. In that sufficient space was not available in its Main Building, space was identified in another building in Hagerstown, which required renovations prior to leasing. That space is the 3rd floor of the Murphy Community Health Center, owned by Meritus Health. The 3rd floor is now named the Agnita M. Stine Schreiber Health Sciences Center in recognition of a major donor to USMH. This name will encompass the building's 2nd floor (included in USMH's lease) at the point that USMH expands to include any health sciences programs there. Frostburg State University will not be charged rent for its use of the space, nor will it be required to pay any building operating expenses, such as utilities and security (both contractual and electronic). All of these expenses will be the responsibility of USMH. Students and faculty will have the same level of access to USMH's Main Building, including the library, its various computer labs, study lounges, and other space as any other USMH student, faculty or staff member.

Funds required for the renovations, and for all furnishings, computers and IT infrastructure planned on behalf of the Health Sciences Center will come from the *Building a Legacy of Care* Campaign initiated by USMH. This Campaign included a combination of contributions from private individuals, private foundations and corporations, and federal grant funds.

The \$300,000 ARC grant requires \$300,000 in matching funds from private sources that must be used for the same purposes as the grant itself. The grant may only be used for furnishings, computers and other IT, classroom furniture, and instructional equipment. It may not be used for physical renovations. Hence, the \$600,000 furnishings and equipment budget will be expended in addition to all permanent physical renovations to the facility, expected to amount to more than \$500,000.

In addition to FSU not having to pay rental expenses and building operating expenses, standard facilities provisions by USMH (which are not reimbursed by FSU) includes office and classroom furniture, computers for faculty, staff and administration, classroom computers and monitors as needed by the program, IT support, and high-speed internet connections throughout the facility that include digital outlets and Wi-Fi.

As funds are available from the \$600,000 combined grant and matching funds after all required provisions have been purchased, USMH will assist with the procurement of clinical instruction equipment and teaching technologies specific to the Physician Assistant Studies program. See below.

This budget represents USMH’s best intentions with regard to non-obligatory items, but should not be considered a contractual obligation of USMH with respect to items not required.

Budget Item	Budget (as of 2/1/18)	Actual Expenditure
Architectural fees	\$40,000	
Signage	\$6,000	
Office, classroom & lab furniture	\$92,000	
Desktop & laptop computers, large-screen monitors, etc.	\$70,000	
IT infrastructure	\$134,000	
Clinical equip. & health-related teaching technologies	\$208,000	
Anatomical models (variable budget amount)	\$50,000	
Total	\$600,000	
<p>~ Blue lettering broadly represents items planned to be purchased by USMH while not being obligated to do so. As required items come in below or above budget, those funds will move in and out of the clinical instructional and/or anatomical model budget lines. The total of \$600,000 will be spent at this facility to aid the startup of the Physician Assistant Studies program.</p>		

Appendix C

Budget Detail – Capital Equipment and Expense Other

	FY19	FY 20	FY 21	FY 22	FY23
Capital Equipment (Instructional)					
Replacement equipment			8,000	8,800	9,680
Expenses Capital (see detail Capital Cost tab)	607,800			50,000	

Anticipated Capital Instructional Equipment Cost Detail			
	Cost each	Number	Total Cost
Abdominal Examination Trainer	\$6,000	5	\$30,000
Labor and Delivery Trainer	\$8,240	5	\$41,200
Knee Aspiration & Injection Trainer	\$2,970	5	\$14,850
Female Pelvic Trainer Mk3	\$6,280	5	\$31,400
Clinical Male Pelvic Trainer Mk2	\$6,490	5	\$32,450
Injection Trainer	\$190	5	\$950
Advanced Venipuncture Arm	\$930	5	\$4,650
Rectal Examination Trainer Mk2	\$2,010	5	\$10,050
Shoulder for Joint Injection	\$3,370	5	\$16,850
Examination & Diagnostic Breast Trainer	\$890	5	\$4,450
Eye Examination Simulator	\$1,450	1	\$1,450
FAST/ER FAN Ultrasound Exam Training Model	\$19,000	5	\$95,000
Anatomage	\$60,000	2	\$120,000
Sonosim	\$15,000	2	\$30,000
EKG Machine	\$3,000	1	\$3,000
Welsh Allen Wall Mounts	\$1,000	15	\$15,000
Defibrillator	\$1,500	1	\$1,500
SimMan	\$90,000	1	\$90,000
Lecture Capture/Recording	\$15,000	2	\$30,000
Telemedicine	\$15,000	1	\$15,000
Sim Recording	\$20,000	1	\$20,000
TOTAL			\$607,800

Anticipated Other Operational Costs	FY19	FY 20	FY 21	FY 22	FY23
Annual Travel -non conference travel (SCPE supervision) @ 400 miles/wk x 46	10,000	15,000	15,000	15,000	15,000
Accreditation/Education Conferences and travel (required)/PD Other	20,000	18,000	18,000	18,000	18,000
Professional Development/ Licensing/Memberships (PA faculty)@ \$2300 each	6,900	11,500	11,500	11,500	11,500
Medical Supplies(estimated \$800/student/year didactic phase)	20,000	22,000	24,200	26,620	29,282
Office Supplies	5,000	5,500	6,050	6,655	7,321
Phones (Cell)	3,000	3,300	3,630	3,993	4,392
AGR Fee Contract	10,000	11,000	12,100	13,310	14,641
Professional Patient/Simulation Fee Contract	10,000	11,000	12,100	13,310	14,641
Accreditation/Renewal Fees	23,500	15,000	20,000	15,000	20,000
Photocopying/Printing/Postage	6,000	6,600	7,260	7,986	8,785
Exam Soft license	6,000	6,180	6,365	6,556	6,753
Lecture Capture (equipment cost is in capital line)		3,000	3,000	3,000	3,000
Simulation Recording maintenance (equipment cost is in capital line)		3,000	3,000	3,000	3,000
Telemedicine maintenance (equipment cost is in capital line)		1,500	1,500	1,500	1,500
Evalue/Typon license	6,000	6,180	6,365	6,556	6,753
Misc. -Clinical Site Support	3,000	6,000	6,600	7,260	7,986
Liability Insurance	10,000	11,000	12,100	13,310	14,641
Accreditation Consultant Fee	5,000	5,000	11,000	11,000	1,000
Faculty recruitment	14,500	14,500	14,500	-	-
Medical disposal	500	1,000	1,000	1,000	1,000
Marketing	10,000	7,000	7,000	7,000	7,000
CASPA Admissions/PAEA Dues	9,450	3,950	3,950	3,950	3,950
Total	179,350	187,710	206,721	198,007	202,645



BOARD OF REGENTS

SUMMARY OF ITEM FOR ACTION, INFORMATION, OR DISCUSSION

TOPIC: Towson University: Master of Science in Actuarial Science and Predictive Analytics

COMMITTEE: Education Policy and Student Life

DATE OF COMMITTEE MEETING: Tuesday, May 15, 2018

SUMMARY: Towson University (TU) proposes to offer the Master of Science in Actuarial Science and Predictive Analytics (ASPA) program. The impetus for the proposed ASPA is in alignment with the recent significant growth opportunities and changes experienced in the actuarial field to keep up with new and emerging applications, particularly in the risk assessment and predictive analytics areas.

The proposed ASPA program will be the first of its kind in Maryland and will build upon the strength of a popular undergraduate program at TU, and will prepare students for a field that projects a 25% job growth in Maryland from 2014-2024. It will specialize in offering advanced level Actuarial Science curriculum specialties of forecasting, predictive modeling, and risk analysis and management to address workforce demands. The proposed ASPA will prepare students to succeed in an occupational marketplace that has increasingly adopted risk management practices and data analytics.

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

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

CHANCELLOR’S RECOMMENDATION: That the Education Policy and Student Life Committee recommend that the Board of Regents approve the proposal from Towson University to offer the Master of Science in Actuarial Science and Predictive Analytics.

COMMITTEE RECOMMENDATION:

DATE:

BOARD ACTION:

DATE:

SUBMITTED BY: Joann A. Boughman 301-445-1992 jboughman@usmd.edu

MARYLAND HIGHER EDUCATION COMMISSION
ACADEMIC PROGRAM PROPOSAL

- NEW INSTRUCTIONAL PROGRAM
- SUBSTANTIAL EXPANSION/MAJOR MODIFICATION
- COOPERATIVE DEGREE PROGRAM
- WITHIN EXISTING RESOURCES or REQUIRING NEW RESOURCES



Fall 2018

Projected Implementation
Date

M.S.

Actuarial Science and Predictive Analytics

Award to be
Offered

Title of Proposed Program

Main Campus

Face-to-Face

Location

Method of Delivery

Suggested HEGIS Code

52.1304 Actuarial Science

Suggested CIP Code

Mathematics

Dr. Michael O'Leary

Department of Proposed
Program

Name of Department Head

Gary Levy

glevy@towson.edu

410-704-4382

Contact
Name

Contact E-Mail
Address

Contact Phone Number

Signature/Date

President/Chief Executive Approved

Date

4/4/2018

Date Endorsed/Approved by Governing Board



Executive Summary

The Mathematics Department at Towson University proposes a new Master of Science in Actuarial Science and Predictive Analytics degree program. Actuarial Science is a field that uses mathematical, statistical and computer skills to identify, quantify, measure, and manage risk in insurance, finance, and other industries. Actuaries are business executives who are professionally trained in the mathematical sciences and who specialize in the evaluation of financial risk. They help the business and individuals make decisions and plan for the future.

Recently the actuarial field has experienced significant growth opportunities and changes as it keeps up with new and emerging fields of application, particularly in the risk assessment and predictive analytics areas. These new areas have been widely recognized and are being incorporated into new educational curriculum across the field. The Society of Actuaries (SOA) updated curriculum emphasizes “the use of predictive analytics has spread to most areas of actuarial practice”¹ and actuaries need to have data analytics skills beyond regression and time series.

The changes in the actuarial field represent an opportunity for Towson University to continue to build on its nationally lauded actuarial undergraduate concentration with the proposed new program. The proposed program will specialize in offering advanced level Actuarial Science curriculum specialties of forecasting, predictive modeling, and risk analysis/management. It will also incorporate emerging tools in technology, statistical and data analysis, and quantitative analysis to prepare students to be well positioned in the actuarial science field.

Market considerations show strong support and need for the proposed program

1. The profession of actuary is consistently ranked among the top professions using criteria such as income, security, employment prospects, and work environment².
2. The U.S. Department of Labor predicted (Department of Labor Occupational Handbook, 2014), “Employment of actuaries is projected to grow 18 percent from 2014 to 2024, much faster than the average for all occupations.”³
3. There is strong support and desire from local companies for the proposed program. We have recently visited the local companies, such as, Transamerica, Aetna, and Travelers etc. They all support the proposed program.
4. There is strong interest and demand from students at Towson for the proposed program. The proposed graduate program would also increase the attractiveness

¹ Society of Actuaries, ASA and CERA Curriculum Changes Fact Sheet:
<https://www.soa.org/Education/General-Info/2016-asa-cera-curriculum-changes.aspx>

² Be an Actuary, <http://www.beanactuary.org/what/top/?fa=a-top-ranked-job>

³ Bureau of Labor Statistics, <https://www.bls.gov/ooh/math/actuaries.htm>



of the undergraduate Actuarial Science and Risk Management (ASRM) concentration to prospective students.

Builds upon strong and nationally recognized undergraduate program

1. The undergraduate Actuarial Science and Risk Management concentration of the Mathematics degree at Towson University is one of the best actuarial science programs in the country – it is the only program in Maryland recognized as a Center of Actuarial Excellence (CAE) by the SOA and is one of only 17 CAEs in the entire country.
2. The ASRM faculty members at Towson are experts, committed and well trained in the fields. The foundations for the proposed program are very strong.

Uniquely and strongly positioned

1. There are no similar graduate programs in Maryland. The addition of this program would serve the needs of students in Maryland and fill the current actuarial science graduate education gap in the state.
2. Graduate programs in Actuarial Science have become more important in recent years and have been adopted by many universities. Eleven of the 17 recognized CAE all offer graduate programs. The proposed ASPA program is expected to provide a strong competitive advantage relative to other actuarial science programs due to implementing the advanced emerging techniques into the curriculum.

Minimal Financial Risk and Investment

1. Program costs are minimal, with no increases in full-time faculty until the third year of the program.
2. Increased revenues are expected from the ASRM undergraduate students continuing their Master's degree after graduation. Recruitment of new students looking for new opportunities will also help to increase revenue.
3. The proposed program will be an interdisciplinary and collaborative effort with the current Master of Science in Applied and Industrial Mathematics program of the Mathematics department. There will be synergistic opportunities in designing and offering courses.

Program Delivery Details

1. The proposed program will require at least 10 courses (a minimum of 30 units) and pass at least two Society of Actuaries professional exams.
2. Graduate only courses will be available in a weekend and evening format that accommodates both part-time and full-time students.

Aligns with Maryland State and Towson University's Missions and Goals

1. The proposed program is consistent with Towson University's mission to provide select, high quality programs in professional fields where there is evidence of both need and of corresponding institutional strength.



2. The proposed program aligns goals set forth by the Maryland State Plan for Postsecondary, Quality and Effectiveness, Economic Growth and Vitality, and Affordability and Completion:

A. Centrality to institutional mission statement and planning priorities

Towson University's Fisher College of Science and Mathematics proposes a new Master of Science in Actuarial Science and Predictive Analytics. The proposed master's program of 30 credits will prepare students to succeed in an occupational marketplace that has increasingly adopted risk management practices and data analytics. The program will combine theory, practice, and predictive modeling to provide students with critical and analytical tools. The program will be the first of its kind in Maryland, will build upon the strength of a popular undergraduate program at TU, and will prepare students for a field projecting 25% job growth in Maryland from 2014-2024.⁴

Relationship to the Towson University Mission, Vision, and Strategic Plan

The proposed Master of Science in Actuarial Science and Predictive Analytics (ASPA) program reflects Towson University's mission, vision, and strategic plan. The new program is designed to

1. Build an interdisciplinary foundation in actuarial science with emerging technology, predictive modeling, and curricular content that encourages "thinking critically and meaningfully"
2. Provide select, high quality programs in professional fields where there is evidence both of need and of corresponding institutional strength. The Master of Science degree in Actuarial Science and Predictive Analytics will produce graduates who can meet the challenges of the actuarial profession today, prepare for the opportunities of tomorrow, and ultimately "enrich the culture, society, economy, and environment of Maryland, the region, and beyond"
3. Provide the most current and advanced skill sets and knowledge in the Actuarial Science professional career that align with national trends and span the areas of STEM, business, and finance education
4. Engage students in Maryland, serving communities' needs and providing our students with varied internship and service learning opportunities through industry relationships, networking opportunities, a capstone and professional practices course, and a recommended internship
5. Empower students to achieve their career goals and "enrich the culture, society, economy, and environment of Maryland, the region, and beyond" through a careful curricular plan that targets a student's academic growth while seeking required experiences needed to support career outcomes

⁴ Department of Labor and Statistics, Occupation Profile: Actuaries. Collected from www.careeronestop.org/Toolkit/Careers/Occupations/occupationprofile.aspx?keyword=Actuaries&onetcode=15201100&location=Maryland on Aug 30, 2017.



6. Create a more diverse and inclusive campus by attracting minority students as well as international students. The program reflects the mission statement of TU, whose institutional objectives include a commitment to educating “local and global citizenship and leadership.”

Relationship to the Jess & Mildred Fisher College of Science & Mathematics (FCSM)
Mission and Vision

The proposed program is designed to:

1. Reflect the mission of the FCSM at TU; the program will “serve the metropolitan community as well as to meet regional, national and international needs.”
2. Provide “the best and most effective learning” in alignment with the FCSM mission by offering a truly interdisciplinary graduate course of study and requiring students to pass two Society of Actuaries international professional exams.
3. Enhance the quality of the education to ensure students are “fully qualified to work in any setting and also to lead others with their passion for discovery.” For example, students with two SOA exams and internship experience are able to find a very good job locally and globally to start the actuarial career. Many CEOs, CFOs, and Presidents of companies are actuaries.

B. Critical and compelling regional or Statewide need as identified in the State Plan

The proposed new program provides the quality and effectiveness that will fulfill the current education gap in the State and will meet postsecondary education goals in Maryland.

The need for Quality and Effectiveness:

The proposed MS in Actuarial Science and Predictive Analytics program will align the goal 1 of the Maryland State Plan for Postsecondary Education, Quality and Effectiveness.

The undergraduate concentration in Actuarial Science and Risk Management at Towson University has continued to focus on quality and effectiveness of its program, and these continued efforts have supported the program’s recognition of excellence in the actuarial community. The current program at Towson is recognized as 1 of only 31 Centers of Actuarial Excellence (CAE) internationally, and 1 of only 17 CAE nationally. The proposed program builds upon the excellence of the undergraduate program with emphasis on continued excellence from faculty and staff; introduction of modern skillsets, knowledge, and technology; and enhanced opportunities of hands-on real world experience for the students.

The need for Economic Growth and Vitality:



The proposed ASPA program will align the goal 5 of the Maryland State Plan for Postsecondary Education, Economic Growth and Vitality. The Plan notes, *Postsecondary education is an engine of economic growth and vitality. Individuals who obtain degrees and other credentials receive higher earnings, are employed at a higher rate, and generate improved tax receipts for the State, counties, and municipalities than those without advanced skills and training.*⁵

1. Further actuarial education of more students satisfies strong market demand for actuarially trained professionals and supports economic growth and vitality. Multiple sources strongly point to the need for more actuarial professionals:
 - Jobs Rated Almanac - Although an unheralded profession, “actuary” continues to be ranked among the top professions by *Jobs Rated Almanac*.⁶ Using criteria such as income, security, employment prospects, and work environment, the profession consistently places at or near the top of over 200 career choices. The Jobs Rated Almanac voted the actuarial profession as the No. 11 profession in the United States in 2017. CareerCast.com ranks predictive analytics trained professionals, such as data scientists and statisticians in the top five careers.⁷
 - Department of Labor Projections – The proposed program is designed to provide students with the skills necessary to conduct financial analysis and manage financial risks. U.S. Department of Labor projections indicate a growing need for actuaries in coming years (Department of Labor Occupational Handbook, 2016). Employment growth is expected in finance and investment, banking, software development, health services and management, and actuarial consulting. The rise in terrorism is expected to increase the need for experts in risk assessment and management. Employment of actuaries is projected to grow 18 percent nationwide from 2014 to 2024, much faster than the average for all occupations. The median salary is over \$100,000 per year in the U.S.⁸, and the mean annual wage is over \$120,000 in Washington-Arlington-Alexandria, DC-VA-MD-WV Metropolitan Division⁹ which is much higher than almost all careers in Maryland.⁸⁹¹⁰⁰
 - Employment of statisticians (Predictive Analytics) is projected to grow 34 percent nationwide from 2014 to 2024, much faster than the average for all

⁵ Maryland Higher Education Commission. *Maryland Ready 2013-2017: Maryland State Plan for Postsecondary Education*. p.54.

⁶ Be an Actuary <http://www.beanactuary.org/what/top/?fa=articles>

⁷ CareerCast.com.. *Jobs Rated Report 2017: Ranking 200 Jobs*. Collected from <http://www.careerassist.com/jobs-rated/2017-jobs-rated-report> on Aug 30, 2017.

⁸ Occupational Outlook Handbook : <http://www.bls.gov/ooh/math/actuaries.htm>
https://www.careerinfonet.org/occ_rep.asp?next=occ_rep&Level=&optstatus=001000000&jobfam=15&id=8&nodeid=2&soccode=152011&menuMode=&stfips=24&x=65&y=16

⁹ Bureau of Labor Statistics. Collected from <https://www.bls.gov/oes/current/oes152011.htm> on Aug 30, 2017.

¹⁰ Payscale.com. Collected from <http://www.payscale.com/research/US/State=Maryland/Salary> on Aug 30, 2017.



occupations.¹¹ Growth is expected to result from more widespread use of statistical analysis to make informed business and healthcare decisions. Actuaries with backgrounds in predictive analytics gain a competitive career advantage.

2. The actuarial profession has grown in demand in fields not traditionally thought of as actuarial in nature. This growth is expected to continue:
 - Increasingly, actuaries with a background of predictive analytics serve as consultants to companies that do not have actuaries on staff to develop pension and retirement planning programs. Management consulting, especially human resource consulting in the healthcare and retirement planning field, is expected to grow faster than the average. In addition, to meet the growing need of the aging population to manage retirement planning, actuaries will increasingly find roles as financial planning advisors.
 - Risks associated with terrorism have dramatically increased in recent years, and actuaries will increasingly find opportunities to evaluate and manage these risks. Additionally, actuaries will continue to be needed to evaluate risks associated with other catastrophes, such as earthquakes, tornadoes, hurricanes, floods, and other natural disasters. Environmental and operational risk management are growing areas in the fields of property and casualty insurance. Actuaries evaluate risks such as the likely environmental impacts of water environmental management, or the costs and benefits of implementing pollution control equipment in a factory. Finally, they rely on actuaries to evaluate the risks of building versus buying new facilities or capital equipment.
 - Fraudulent financial reporting issues (e.g., the 2002 collapse of Enron) have increased the need by many organizations for enterprise risk management to manage internal audit, investments, strategic planning, pricing of financial products, compliance, and capital planning. Actuaries will increasingly find opportunities in this new organizational function, as the Chief Risk Officer, or as consultants to the Chief Risk Officer.¹²

The need for access and affordability

The proposed MS in Actuarial Science and Predictive Analytics program also will respond directly to goal 2 of the Maryland State Plan for Postsecondary Education, Access, Affordability, and Completion. The Plan notes, “in ensuring that all Marylanders who can benefit from and are willing to engage in postsecondary education have the opportunity to do so.” (p28)

¹¹ Department of Labor. Collected from <https://www.careeronestop.org/toolkit/careers/occupations/Occupationprofile.aspx?keyword=Statisticians&onetcode=15204100&ES=Y&EST=statistician> on Aug 30, 2017.

¹² Be an Actuary. <http://www.beanactuary.org/why/?fa=non-traditional-trajectories>.



1. Graduate Education Need in the State

- A unique and singular program in Maryland: There are no Master's program in Actuarial Science in Maryland currently. The addition of this program would serve the needs of students in Maryland and fill the gap in the current actuarial science graduate education field. Student inquiries in recent years have pointed to strong interest and desire. An in-house survey also shows current Actuarial Science and Risk Management students are interested in continuing to a Master's program.
- Furthermore, Graduate programs in Actuarial Science have become more important in recent years and have been adopted by many universities – 11 of the 17 recognized CAEs in the U.S. offer graduate programs. Universities in the surrounding region such as Columbia University in New York, George Mason University in Virginia, and Temple University in Pennsylvania offer graduate programs as well.

2. One of the only affordable graduate programs in Actuarial Science for Maryland students

- When reviewing graduate level programs in the surrounding areas, it is clear that the proposed program will be one of the only affordable graduate programs for Maryland students in the wider region. In fact surrounding programs mentioned above (Columbia University in New York, George Mason University in Virginia, and Temple University in Pennsylvania) require almost 2 or 3 times the tuition for all students or out of state students (see Section D for details).
- The proposed program will offer additional opportunity to students across Maryland State who may want to pursue advanced degree in actuarial science and predictive analytics. This gives an opportunity, for example, for a student with an undergraduate degree in actuarial science or related fields from Morgan State University or Loyola University to advance their actuarial education in state where they may previously have had to go to the Universities in other States.

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

The Actuaries occupation consistently rates as one of the best jobs in America according to work environment, employment outlook, job security, growth opportunity, salary, and more. The Economic Development and Employer Planning System (EDEPS), for example, predicts actuarial job opening growth to significantly outpace other fields in the next 10 years. The optimistic career outlook for actuaries is similarly reflected in Maryland and surrounding regions. The Maryland Department of Labor, Licensing and Regulation (DLLR) projects a 25.1% increase in the actuarial occupation from 2014 - 2024 (Appendix 1).



The EDEPS Occupational Supply Demand Report projects, on average, 1170 job openings for actuaries nationally, and over 100 job openings for actuaries in Maryland, D.C., and Pennsylvania.

Current and Projected Supply of Graduates with Bachelor's Degrees:

Although the actuarial employment market is expanding, there remains only one other actuarial program (Morgan State University Undergraduate) in Maryland other than Towson University's concentration of the Mathematics bachelor's program and the Loyola University Maryland concentration of the Statistics bachelor's program. The proposed program would be the only Master's program in Actuarial Science in the state and would serve a vital role in furthering the educational needs of students.

Table 2. Enrollment Trends

MARYLAND HIGHER EDUCATION COMMISSION TRENDS IN ENROLLMENT BY PROGRAM: BACHELOR'S					
ACTUARIAL SCIENCE	2012	2013	2014	2015	2016
0504-01 Morgan State University	21	24	20	22	27
1702-01 Loyola University Maryland (Statistics)*	9	13	20	26	27
1701-00 Towson University (Math)*	233	251	255	244	225

Source: MHEC Trends in Enrollment Data by Program

*The MHEC enrollment data display the program-level enrollments; the Commission does not disaggregate the data by concentration. Actuarial Science and Risk Management (ASRM) is the largest one of the four concentrations in the Mathematics Department of Towson University. The other three concentrations are Mathematics education, Pure Mathematics, and Applied Mathematics. Loyola University Maryland's Statistics program includes two concentrations: Actuarial Science and Statistical Science.

Degree Data at the Undergraduate level:

Table 3. Degree Trends

MARYLAND HIGHER EDUCATION COMMISSION TRENDS IN DEGREES BY PROGRAM: BACHELOR'S					
	2012	2013	2014	2015	2016
0504-01 Morgan State University (Actuarial Science)	1	2	7	2	6
1702-01 Loyola University Maryland (Statistics)	3	3	5	3	5
1701-00 Towson University (Math)*	47	52	47	44	44

Source: MHEC Trends in Degrees and Certificates by Program

Table 4. Towson University Disaggregated Degrees with Actuarial Science Concentration

TOWSON UNIVERSITY TRENDS IN DEGREES: ACTUARIAL SCIENCE CONCENTRATION					
ACTUARIAL SCIENCE	2012	2013	2014	2015	2016
1701-00 Towson University (Math)*	47	52	47	44	44



ACTUARIAL SCIENCE AND RISK MANAGEMENT CONCENTRATION	19	27	21	20	17
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Source: Towson University

D. Reasonableness of program duplication

The proposed program will be the only Master of Science in Actuarial Science and Predictive Analytics program in Maryland. This program will not result in any program duplication in Maryland.

There are some Master of Science in Actuarial Science programs in the larger surrounding area, but the proposed program is unique among these programs and will not be a duplication of any of these existing programs. The proposed TU program differs from these programs in the region in the following ways:

- The proposed program builds upon and complements the existing undergraduate actuarial concentration at TU that is nationally recognized as a Center of Actuarial Excellence (CAE).
- The proposed program will train students beyond just Actuarial Science. It uses Actuarial Science as a foundation to train candidates in predictive analytics and risk management skills which can serve as a differentiator in the actuarial field and also have broad appeal and applicability beyond the actuarial field.
- The proposed program is considerably more affordable than the other programs.

The following table compares the proposed program to all Master programs in the surrounding area.

Table 5. Master’s Programs, Mid-Atlantic Region

PROGRAM	STATE	OTHER ACTUARIAL SCIENCE DEGREES OFFERED	TUITION / CREDIT	ANNUAL FEES	Center of Actuarial Excellence Status (YES/NO)
Columbia University - Actuarial Science M.S. ¹³	NY	None	\$2018	\$948	*No
George Mason University – Actuarial Science graduate certificate ¹⁴	VA	None	\$1516	\$300	*No
Temple University – Actuarial Science M.S. ¹⁵	PA	Bachelor’s and Ph.D. programs in Actuarial Science	\$1488	\$750	✓Yes
Towson University – proposed Actuarial Science and Predictive Analytics M.S.	MD	Concentration in Actuarial Science and Risk Management	\$398	\$360	✓Yes

¹³ <http://sps.columbia.edu/actuarial-science>

¹⁴ <http://math.gmu.edu/graduate/cert-in-actuarial.php>

¹⁵ http://www.fox.temple.edu/cms_academics/dept/risk-insurance-healthcaremanagement/undergraduate/risk-management-and-insurance/



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

This program will have no impact on the uniqueness and institutional identities and missions of HBIs.

F. Relevance to high-demand programs at Historically Black Institutions (HBIs)

The proposed program is not expected to impact high-demand programs at Historically Black Institutions.

Morgan State University, the only HBI which has an actuarial program, offers a [Bachelor of Science in Actuarial Science](#) degree via their Mathematics program. Comparatively, the proposed Master of Science in Actuarial Science and Predictive Analytics will be the only program of its kind and the only graduate level Actuarial Science program in Maryland. This means the proposed master's program covers a very different program curriculum than Morgan State University's bachelor's program and is not expected to impact the program at Morgan State University.

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

The Master of Science in Actuarial Science and Predictive Analytics (ASPA) will prepare students to succeed in a market landscape that has greatly adopted risk management practices and data analytics. The proposed program will combine theory, practice, and predictive modeling, providing students with critical and analytical tools that will enable them to have the right skills to succeed in the marketplace and continue to be industry leaders.

Admission Requirements:

Admission to Master of Science degree in Actuarial Science and Predictive Analytics is competitive. The eligibility requirements to be admitted into the program are:

- A baccalaureate degree in mathematics or science or related field from a regionally accredited college or university verified on original transcripts, sent by the institution directly to Towson University. The student should be able to demonstrate a strong mathematics background through grades in mathematics courses; an undergraduate B.S. thesis focused on mathematics, sciences, or risk analysis; or work experience involving actuarial science. GPA (Grade Point Average): at least 3.0 (on 4.0 scale) on the last two years of the baccalaureate degree.
- The applicant's undergraduate training must have included at least three terms of calculus, calculus based probability, mathematical statistics, and linear algebra. Students with any deficiency in their mathematical background may be admitted conditionally if they are willing to correct such deficiency.
- Completion of either SOA (Society of Actuaries) Exam or GRE (Graduate Record Exam).



- Students who received their degree outside the United States must provide official verification of their English competency by submitting an English assessment report of their IELTS, TOEFL or other Towson University-approved testing system. Students must meet the standards set by Towson University to be admitted into the program.
- Passage of the first professional examination (Exam P) sponsored by the Society of Actuaries and the Casualty Actuarial Society may be considered as a substitute for college mathematics requirements, subject to department approval.

Degree Requirements:

The student is required to successfully complete at least 10 courses (Students may need to take more than 10 courses if prerequisites are not met) and **pass at least two Society of Actuaries professional exam (before or during the graduate study)**.

10-course (a minimum of 30 units) requirement is indicated below:

1. At least six courses from List A
2. At least four courses from List B
3. At most three 500-level courses from List A or List B will count toward the degree

List A

Math 512	Theory of Interest	4
Math 538	Long-Term Actuarial Models I	3
Math 542	Short Term Actuarial Models	4
Math 548	Long-Term Actuarial Models II	3
Math 585	Mathematical Finance	3
Math 586	Risk Management & Financial Engineering	3
Math 639	Loss Models	4
Math 641	Enterprise Risk Management	3
Math 642	Credibility and Simulation	3
Math 643	Computational Methods of Mathematical Finance	3
Math 644	Mathematics of Financial Derivatives	3
Math 688	Topics in Actuarial Science and Risk Management	3

List B

Math 533	Applied Regression and Time Series Predictive Modeling	4
Math 632	Computational Stochastics Modeling	3
Math 634	Time Series Analysis and Forecasting	3



Math 638	Applied Multivariate Statistical Analysis	3
Math 647	Predictive Analytics	3
Math 688	Topics in Actuarial Science and Risk Management	3

The New Courses and Existing Courses

New Courses: The following are 4 new courses for the Master of Science in Actuarial Science and Predictive Analytics.

- MATH 641 ERM – Enterprise Risk Management

Catalog Description: This course covers part of the syllabus of the Enterprise Risk Management exam offered by Society of Actuaries. It serves as an introduction to Enterprise Risk Management. It will define and categorize different types of risks an entity faces, and define an ERM framework. Ways to measure and quantify the risk, such as (principle based) Economic Capital, Value at Risk (VaR), and stress scenarios will be analyzed and compared. The course will conclude with applications of these methods in a case study of an insurance company and recent regulatory developments.

- Math 642 Credibility and Simulation

Catalog Description: The course covers subjects in modeling and simulations including: limited fluctuation (classical) credibility, Bayesian credibility, conjugate priors, Buhlmann and Buhlmann-Straub models, empirical Bayesian method in the nonparametric, and semiparametric cases.

- Math 647 Predictive Analytics

Catalog Description: The course covers the principles and methodologies in predictive modeling. The topics include prediction versus interpretation; assessing model accuracy; resampling methods; bootstrap; subset selection; shrinkage methods; dimension reduction methods; the logistic model; bagging; random forests; principal components analysis; clustering methods. R, SAS, SPSS or a similar software is used for real data analysis.

- MATH 688 Topics in Actuarial Science and Risk Management

Catalog Description: This course will cover various topics in Actuarial Science and Risk Management selected by the instructor. Selected topics include financial reporting, valuation, and management considerations for life insurance companies; capital and risk management, including securitization techniques in the insurance industry; worker's compensation programs and pricing; emerging techniques for use by actuaries; actuarial studies and communication techniques, and possibly other topics.



Redesigned and Retitled Courses:

- Math 512 Theory of Interest

Catalog Description: This courses covers mathematical theory and applications of key financial management concepts and procedures including money growth; force of interest; annuities; perpetuities; amortization; stocks; bonds; yield approximation approaches; term structure of interest rates; swaps; determinants of interest; duration, convexity and asset matching.

- Math 537 Applied Regression and Time Series Predictive Modeling

Catalog Description: Simple and multiple regression, least squares estimates, hypothesis testing, confidence intervals and prediction intervals, model building methods and diagnostic checking. Non-seasonal time series models: autoregressive, moving-average and/or autoregressive integrated moving-average models, parameter estimation and forecasting. Minitab or a similar software is used for real data analysis.

- Math 538 Long-Term Actuarial Models I

Catalog Description: Theory and applications of long-term actuarial mathematics in the area of life insurance, annuities and pensions. Topics include survival models, life table, present value random variables for contingent insurance and annuities, future loss random variables, actuarial equivalence principle and other principles for pricing life insurance and annuity contracts, benefit reserves.

- Math 542 Short Term Actuarial Models

Catalog Description: This course covers part of the syllabus of the Short-Term Actuarial Mathematics exam offered by Society of Actuaries. Topics including severity models, frequency models, aggregate models, risk measures, construction and selection of parametric models, insurance and reinsurance coverages, and pricing and reserving for short-term insurance coverages.

- Math 548 Long-Term Actuarial Models II

Catalog Description: This course covers the second part of the syllabus of the Long-Term Actuarial Mathematics offered by the Society of Actuaries. Topics include future loss random variables; reserves for traditional life insurances and annuities; multiple state models including multiple decrements models; multiple life functions; estimates of survival models; profit testing; pension plans and retirement benefits

- Math 586 Risk Management & Financial Engineering



Catalog Description: Mean-variance portfolio theory, assets pricing models, market efficiency and behavioral finance, investment risk and project analysis, capital structures, Cash flow engineering, Monte Carlo methods, statistical analysis of simulated data, risk measures, framework for fixed income engineering, portfolio management, change of measures and Girsanov Theorem and tools for volatility engineering. Computer laboratory activities throughout.

- Math 634 Time Series Analysis and Forecasting

Catalog Description: An introduction to statistical models for time series analysis and forecasting. Topics include time series decompositions, exponential smoothing, dynamic regression, spectral analysis and filtering. A variety of models will be discussed including the Holt, Holt-Winters, ARMA, ARIMA, SARIMA, and state-space models. R, SAS, SPSS or a similar software is used for real data analysis.

Existing Courses: Course descriptions are provided in the Towson University Catalog and in Appendix 2.

- Math 585 Mathematical Finance
- Math 639 Loss Models
- Math 632 Computational Stochastics Modeling
- Math 638 Applied Multivariate Statistical Analysis
- Math 643 Computational Methods of Mathematical Finance
- Math 644 Mathematics of Financial Derivatives

Program Goals and Outcomes:

The intent of the proposed Master of Science in Actuarial Science and Predictive Analytics program is to prepare students with a foundational understanding in predictive analytics to ensure students stay current in the evolving actuarial profession, prepare them for tomorrow's challenge, and "continues to meet the needs of employers and other users of actuarial services".¹⁶ At the completion of the program, students are expected to demonstrate the following student learning outcomes:

- Assess and elucidate the theoretical and historical foundations of actuarial science and predictive analytics.
- Choose and defend the choice of mathematical models and technologies to conduct predictive analyses, financial evaluations, and risk management assessments

¹⁶ Society of Actuaries: Plain Talk: Curriculum Review
<https://www.soa.org/boardannouncements/2016/plain-talk-curriculum-review/>



- Compare and contrast the principles and procedures of various methodologies to implement practical and technical aspects of actuarial science and predictive analytics
- Design and conduct a financial project, analyze the findings, and convey the results through professional oral and written reports and graphics that reflect actuarial science standards

Appendix 3 demonstrates the alignment of learning objectives, graduate student characteristics, and the curricular map with the program goals.

H. Adequacy of articulation Not

Applicable.

I. Adequacy of faculty resources

The undergraduate Actuarial Science and Risk Management program at Towson University is one of the best actuarial science programs in the country – it is the only program in Maryland recognized as a Center of Actuarial Excellence (CAE) by the SOA and is 1 of only 17 CAEs in the entire country.

Additionally, the ASRM faculty members at Towson are strongly positioned to continue providing exceptional education to students. With two Fellow of Society of Actuaries (FSA) among the three tenure-track or tenured Actuaries Science faculty members, three have expertise in the area of statistics and predictive analytics field, and one has expertise in financial mathematics. Towson university faculty have the experience, expertise, and knowledge to provide a strong program for students and to attract outstanding prospective students.

The strong program reputation and strong faculty team serve as a great opportunity and exceptional foundation for the Master's program. The new graduate program will provide exciting synergies with the existing nationally recognized undergraduate program.

The proposed Master of Science in Actuarial Science and Predictive Analytics leverages our existing Master of Science in Applied and Industrial Mathematics. Courses are drawn from the existing course list, active and inactive courses from the catalog, and new courses that will provide students more choice. The department could offer one more graduate course per semester due to more students, and the programs share some faculty resources—maximizing the efficiency and effectiveness of the offerings.

Based on projected student enrollment numbers, the proposed program will not require new faculty resources in the first two years. We plan to leverage existing five hundred level courses and six hundred level courses to fulfill the first two years' requirements.

Starting in the third year, we anticipate the proposed program will reach full capacity and will need one half new full-time equivalent, tenure-track position in the Department



of Mathematics at the beginning and increasing to one full time position over time. This new position will support the teaching of a full capacity program and support much needed mentorship in graduate research projects. The addition of the new position will also give the entire faculty team sufficient capacity to support the challenging research requirements needed for Towson University to maintain the Centers of Actuarial Excellence distinction from the Society of Actuaries.

All courses will be taught by full-time TU faculty (addresses minimum requirements detailed in COMAR 13B.02.03.11), and no courses will be taught in an off-campus program (addresses COMAR 13B.02.03.20). The faculty resources table follows below:

Faculty Resources					
	FTE	Highest Degree Earned/Field of Study	Rank	Status (Fulltime or Parttime)	Courses Teaching
Existing Faculty					
Instructor 1	0.125	PhD/Financial Mathematics	Full/ Associate/ Assistant	Full-time	Math 642 Credibility and Simulation
Instructor 2	0.125	PhD/Financial Mathematics	Full/ Associate/ Assistant	Full-time	Math 644 Mathematics of Financial Derivatives
Instructor 3	0.175	PhD/Actuarial Science	Full/ Associate/ Assistant	Full-time	Math 641 Enterprise Risk Management Math 792 Internship II
Instructor 4	0.125	PhD/Actuarial Science	Full/ Associate/ Assistant	Full-time	Math 688 Topics in Actuarial Science and Risk Management
Instructor 5	0.125	PhD/Statistics	Full/ Associate/ Assistant	Full-time	Math 632 Computational Stochastics Modeling
Instructor 6	0.125	PhD/Statistics	Full/ Associate/ Assistant	Full-time	Math 634 Computational Spectral Analysis and Time Series



Instructor 7	0.125	PhD/Statistics	Full/ Associate/ Assistant	Full-time	Math 638 Applied Multivariate Statistical Analysis
Faculty Resources					
	FTE	Highest Degree Earned/Field of Study	Rank	Status (Fulltime or Parttime)	Courses Teaching
Instructor 8	0.175	PhD/Statistics	Full/ Associate/ Assistant	Full-time	Math 647 Predictive Analytics Math 791 Internship I
New Faculty					
Instructor I	1	PhD/Actuarial Science	Assistant	Full-Time	Math 639 Loss Models Math 643 Computational Methods of Mathematical Finance Math 641 Enterprise Risk Management Math 642 Credibility and Simulation Math 791/792 Masters Internship I/II

J. Adequacy of library resources

Albert S. Cook Library at Towson University currently provides access to scholarly databases with content that, in addition to supporting the general needs of the Department of Mathematics, supports the study of Actuarial Science and Predictive Analytics. Namely, databases including Business Source Premier, Accounting & Tax, and Emerald provide access on and off-campus to journals including Annals of Actuarial Science, Risk Management, and the Journal of Risk and Insurance. Articles not immediately available within the library's collection can be requested via Interlibrary



Loan. Bill Helman is the designated librarian for Mathematics and can assist with collection development, teaching, and research needs.

Due to the variety of professional exam study materials and related books required for the program of study, an estimated \$1,000 annually is requested to initiate and maintain the library resources for future students in the proposed program.

K. Adequacy of physical facilities, infrastructure and instructional equipment

This program will require no additional physical facilities, infrastructure or instructional equipment. The program will leverage existing classroom space and optimize timing of courses to offer the proposed program without requiring additional facilities, infrastructure, or instructional equipment.

L. Adequacy of financial resources with documentation

The proposed program requires minimal additional resources as it is built upon the existing ASRM program. We do not anticipate needing any additional funding to cover the first two years of the program. While we anticipate needing a new faculty member starting in year 3, the expected tuition from students in the proposed program will be enough to cover the salary and benefits of a new faculty member. Please see details in Table 1: Resources and Table 2: Expenditures.

M. Adequacy of provisions for evaluation of program

Ongoing evaluation of the proposed program covers 3 main areas including: faculty performance, student success, and curriculum suitability. The evaluation provisions will build upon procedures already in place with the successful undergraduate program and strive for continued excellence.

Faculty:

Faculty of the Master of Science in the Actuarial Science and Predictive Analytics (ASPA) will be reviewed regularly, according to the Towson University policy for faculty review: Assistant Professors are required to have two peer evaluations of their teaching each year; the courses of Associate and Full Professors are evaluated twice in every five year period. In addition, the Director of the ASPA program will consult with faculty members teaching in the program at the beginning and end of each semester. Review of faculty by the Department Chair includes review of course syllabi, one-on-one discussions with faculty member of students and teaching strategies, and gathering feedback from students enrolled in each class.

Additionally, faculty will leverage tools and resources offered by The Society of Actuaries (SOA), the largest professional organization that represents American



actuaries. The SOA regularly provides the professional development opportunities, review, and evaluation of its members. The faculty roster also includes two Fellow of Society of Actuaries (FSA) who are subject to the SOA Continued Professional Development (CPD) requirement that supports faculty self-evaluation and continued professional development.

Courses in the ASPA will be evaluated each semester, utilizing the online student evaluation system currently employed by Towson University for all of its classes. Students' course evaluations and peer classroom observations will enhance and improve faculty in the ASPA teaching.

Student:

Student performance and outcomes will be assessed by many metrics including:

- Records of admission to advanced degree program, such as Ph.D. program.
- Number of the Society of Actuaries professional exams passed by students in the graduate program.
- Faculty evaluation of students' internship experiences combined with recommendations from industry professional.
- Number of graduates who become Actuarial Associates and Actuarial Fellows with the Society of Actuaries.
- Records of job offers and career advancement.

All students in the graduate program must receive a grade of B or better for all courses (courses may not be taken pass-fail) Curriculum:

The ASRM faculty committee will review the curriculum regularly. The Society of Actuaries (SOA) recommendation¹⁷ will be taken into serious consideration during the curriculum review process. Appendix 4 includes the TU Assessment Plan for the ASPA master's program.

N. Consistency with the State's minority student achievement goals

The proposed new ASPA program is consistent with Goal 3 of the Maryland State Plan for Higher Education, Diversity. In fact, the proposed program is aligned with and partners with the two biggest Actuarial Professional organizations, Casualty Actuaries Society (CAS) and Society of Actuaries (SOA), to deliver on diversity and inclusion goals. The CAS/SOA Joint Committee on Career Encouragement & Actuarial Diversity, for example, started over 30 years ago to address lack of diversity in the actuarial profession and promote a diverse actuarial profession by many ways such as, awareness in national and international conferences, scholarships to college students, summer programs for minority high school students, and reimbursement program rewarding the diversity candidates who pass Exam P/1 and or FM/2.¹⁸ The new

¹⁷ Society of Actuaries; Centers of Actuarial Excellence criteria: <https://www.soa.org/cae/>

¹⁸ Society of Actuaries: <https://www.soa.org/about/diversity-inclusion/default/>



program will continue to partner with both organizations to continue delivering on actions such as these to address diversity and inclusion.

O. Relationship to low productivity programs identified by the Commission

Not Applicable

P. If proposing a distance education program, please provide evidence of the Principles of Good Practice

Not Applicable

Q. Program Resources and Expenditures Tables

TABLE 1: RESOURCES

Fill in items highlighted in blue only

Resources Categories	(Year 1)	(Year 2)	(Year 3)	(Year 4)	(Year 5)
1. Reallocated Funds ¹	0	0	0	0	0
2. Tuition/Fee Revenue ²	90,510	183,800	248,655	252,465	384,480
a. Annual Full-time Revenue of New Students					
Number of Full-time Students	5	10	15	15	25
Annual Tuition Rate	\$9,096	\$9,278	\$9,463	\$9,653	\$9,846
Subtotal Tuition	\$45,480	\$92,780	\$141,945	\$144,795	\$246,150
Annual Fees	\$2,970	\$2,970	\$2,970	\$2,970	\$2,970
Subtotal Fees	\$14,850	\$29,700	\$44,550	\$44,550	\$74,250
Total Full-time Revenue of New Students	\$60,330	\$122,480	\$186,495	\$189,345	\$320,400
b. Annual Part-time Revenue					
Number of Part-Time Students	5	10	10	10	10
Credit Hour Tuition Rate	\$379	\$387	\$394	\$402	\$410
Annual Fees Per Credit Hour	\$124	\$124	\$124	\$124	\$124
Annual Credit Hours Per Student	12	12	12	12	12
Subtotal Tuition	\$22,740	\$46,440	\$47,280	\$48,240	\$49,200
Subtotal Fees	\$7,440	\$14,880	\$14,880	\$14,880	\$14,880
Total Part Time Revenue	\$30,180	\$61,320	\$62,160	\$63,120	\$64,080
3. Grants, Contracts & Other Sources ³	\$0	\$0	\$0	\$0	\$0
4. Other Sources	\$0	\$0	\$0	\$0	\$0
TOTAL (Add 1 - 4)	\$90,510	\$183,800	\$248,655	\$252,465	\$384,480

¹ Whenever reallocated funds are included among the resources available to new programs, the following information must be provided in a footnote: origin(s) of reallocated funds, impact of the reallocation on the existing academic program(s), and manner in which the reallocation is consistent with the institution's strategic plan.



² This figure should be a realistic percentage of tuition and fees which will be used to support the new program. Factors such as indirect costs linked to new students and the impact of enrolling continuing students in the new program should be considered when determining the percentage.

³ Whenever external funds are included among the resources, the following information must be provided in a footnote: source of the funding and alternative methods of funding the program after the cessation of external funding.

**TABLE 2: EXPENDITURES**

Fill in blue shaded areas only.

Expenditure Categories	(Year 1)	(Year 2)	(Year 3)	(Year 4)	(Year 5)
1. Total Faculty Expenses	\$0	\$0	\$66,500	\$68,495	\$141,100
(b + c below)					
a. #FTE	0.0	0.0	0.5	0.5	1.0
b. Total Salary			50,000	51,500	106,090
c. Total Benefits	0	0	16,500	16,995	35,010
2. Total Administrative Staff Expenses	0	0	0	0	0
(b + c below)					
a. #FTE					
b. Total Salary					
c. Total Benefits	0	0	0	0	0
3. Total Support Staff Expenses	0	0	0	0	0
(b + c below)					
a. #FTE					
b. Total Salary					
c. Total Benefits	0	0	0	0	0
4. Equipment					
5. Library	1,000	1,000	1,000	1,000	1,000
6. New or Renovated Space					
7. Other Expenses					
TOTAL (1-7)	\$1,000	\$1,000	\$67,500	\$69,495	\$142,100



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Appendix 1 Maryland Long Term Occupational Projections (2014 - 2024)¹⁹

Occupation (keyword search) Contains
"Actuaries"

Occupation	Percent Change		Change	Pct Change
	2014	2024		
Actuaries	522.0	653.0	131.0	25.10%



Department of Labor, Licensing and Regulation
 Division of Workforce Development and Adult Learning
 Office of Workforce Information and Performance
 1100 North Eutaw Street
 Baltimore, Maryland 21201
 410-767-2250
DLWDALLMI-DLLR@maryland.gov



¹⁹ Department of Labor Licensing and Regulation.
<https://www.dllr.state.md.us/lmi/iandoproj/maryland.shtml>. (Captured Dec 6, 2016).



Appendix 2: Course Descriptions

- Math 585 Mathematical Finance

Catalog Description: Mathematical theory, computation and practical application of derivatives in managing financial risk. Parity and option relationships, binomial option pricing, the Black-Scholes equation and formula, option Greeks, marketmaking and delta-hedging, exotic options, lognormal distribution, Brownian motion and Ito's lemma, interest rate models. Computer laboratory activities throughout.

- Math 632 Computational Stochastics Modeling

Catalog Description: Computing expectations and probabilities by conditioning. Markov chains: classification of states, limiting probabilities, gambler's ruin problems, algorithmic efficiency, branching process, time-variable Markov chains, continuous-time Markov chains, birth and death processes, Kolmogorov differential equations, uniformization. Renewal theory and its applications.

- Math 638 Applied Multivariate Statistical Analysis

Catalog Description: A brief review of vector and matrix algebra and an introduction to applications of multivariate statistical methods. Multivariate normal distribution and its properties, inference for mean vector of a multivariate normal distribution, and simultaneous inference for components of the mean vector. Principle components, factor analysis, and discrimination & classifications. The course introduces many applications of the topics related to real world problems in the fields of engineering, sciences, and business. Minitab or a similar software is used for real data analysis.

- Math 639 Loss Models

Catalog Description: Severity models, frequency models, aggregate models, survival models, construction of parametric models, and credibility models.

- Math 643 Computational Methods of Mathematical Finance

Catalog Description: Computation techniques involving tree method, finite difference scheme, Monte Carlo simulation, term structure fitting and modeling, financial derivative pricing, the Greeks of options, Capital Asset Pricing Model, Value-at Risk calculation. Software package such as Mathematica or Excel will be used.

- Math 644 Mathematics of Financial Derivatives

Catalog Description: Modern pricing theory for financial derivatives, stochastic differential equations, Ito formula, martingales, Girsanov Theorem, Feynman-Kac PDE, term structure, Interest-Rate models and derivatives, optimal stopping and American options.



Appendix 3: Alignment of Program Goals with Learning Outcomes, Graduate Student Characteristics, and Curricular Map

Program Goals	Learning Outcomes	Towson Graduates Characteristics	Goal Curricular Alignment
Assess and elucidate the theoretical and historical foundations of actuarial science and predictive analytics	Understand key steps and considerations in building a predictive analytics model.	Information literacy and technological competency	Math 538 Actuarial Models
	Understand ethical and professional considerations with regard to data and modeling.	Effective communication	Math 542 Actuarial Model Construction
		Critical analysis and reasoning	Math 548 Advance Actuarial Models
	Identify and apply actuarial knowledge/concepts within a broader context.	Specialized knowledge in defined fields	Math 632 Computational Stochastics Modeling
		Working in multifaceted work environments	Math 634 Computational Spectral Analysis and Time Series
	Communicate results more efficiently with others, including nonactuaries.	Local and global citizenship and leadership	Math 638 Applied Multivariate Statistical Analysis
	Formulate and execute a schedule and plan for project completion, and anticipate, assess, and adjust continually throughout the process.		Math 639 Loss Models
	Identify the business problem, understand how the available data relates to possible analyses, and use the information to propose models.		Math 647 Predictive Analytics
Demonstrate understanding of course materials and vocabulary through analysis, critique, self-reflection, and revision.		Math 642 Credibility and Simulation Math 688 Topics in Actuarial Science and Risk Management	
Program Goals	Learning Outcomes	Towson Graduates Characteristics	Goal Curricular Alignment



<p>Choose and defend the choice of mathematical models and technologies to conduct predictive analyses, financial evaluations, and risk management assessments</p>	<p>Understand the types of risks faced by an entity and be able to identify, quantify, manage, and analyze these risks.</p> <p>Be able to evaluate and understand the concept and importance of risk models.</p> <p>Understand how the risks faced by an entity can be quantified.</p> <p>To be able to use metrics to measure risk.</p> <p>Understand the approaches for managing risks</p> <p>Understand how an entity makes decisions about appropriate techniques.</p> <p>Understand the concept of economic capital.</p>	<p>Information literacy and technological competency</p> <p>Effective communication</p> <p>Critical analysis and reasoning</p> <p>Specialized knowledge in defined fields</p> <p>Working in multifaceted work environments</p> <p>Local and global citizenship and leadership</p>	<p>Math 538 Actuarial Models</p> <p>Math 542 Actuarial Model Construction</p> <p>Math 548 Advance Actuarial Models</p> <p>Math 585 Mathematical Finance</p> <p>Math 586 Risk Management & Financial Engineering</p> <p>Math 639 Loss Models</p> <p>Math 643 Computational Methods of Mathematical Finance</p> <p>Math 644 Mathematics of Financial Derivatives</p> <p>Math 641 Enterprise Risk Management</p> <p>Math 642 Credibility and Simulation</p> <p>Math 688 Topics in Actuarial Science and Risk Management</p>
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Program Goals	Learning Outcomes	Towson Graduates Characteristics	Goal Curricular Alignment
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<p>Compare and contrast the principles and procedures of various methodologies to implement practical and technical aspects of actuarial science and predictive analytics</p>	<p>Create multiple models for business problems, critically analyze them, and monitoring and validating models, select the “best” model.</p> <p>Demonstrate how each of the financial and nonfinancial risks faced by an entity can be amenable to quantitative analysis including an explanation of the advantages and disadvantages of various techniques such as Value at Risk (VaR), stochastic analysis, and scenario analysis.</p> <p>Conduct exploratory data analysis to identify key relationships that inform initial model selection</p> <p>List and employ the various methods of research that can be conducted to reach the decisions.</p>	<p>Information literacy and technological competency</p> <p>Effective communication</p> <p>Critical analysis and reasoning</p> <p>Specialized knowledge in defined fields</p>	<p>Math 537 Applied Regression and Time Series Predictive Modeling</p> <p>Math 585 Mathematical Finance</p> <p>Math 586 Risk Management & Financial Engineering</p> <p>Math 632 Computational Stochastics Modeling</p> <p>Math 634 Computational Spectral Analysis and Time Series</p> <p>Math 638 Applied Multivariate Statistical Analysis</p> <p>Math 643 Computational Methods of Mathematical Finance</p> <p>Math 644 Mathematics of Financial Derivatives</p> <p>Math 647 Predictive Analytics</p> <p>Math 641 Enterprise Risk Management</p>
<p>Program Goals</p>	<p>Learning Outcomes</p>	<p>Towson Graduates Characteristics</p>	<p>Goal Curricular Alignment</p>



Design and conduct a financial project, analyze the findings, and convey the results through professional oral and written reports and graphics that reflect actuarial science standards	Demonstrate understanding of core concepts of actuarial science and predictive analytics, critique, selfreflection, and revision.	Information literacy and technological competency	Math 538 Actuarial Models
	Define a project’s scope and purpose, and specify its intended audience.	Effective communication	Math 542 Actuarial Model Construction
	Clearly and tailor communication ideas, questions, problems, and solutions in both verbally and in writing.	Critical analysis and reasoning	Math 548 Advance Actuarial Models
	Write, produce, and present the research and project concepts, processes, and results to peers and professionals.		Math 585 Mathematical Finance
			Math 586 Risk Management & Financial Engineering
			Math 639 Loss Models
			Math 647 Predictive Analytics
			Math 641 Enterprise Risk Management
			Math 642 Credibility and Simulation
			Math 688 Topics in Actuarial Science and Risk Management

Appendix 4: Assessment Plan

Curricular Alignment with Student Learning Outcomes (Objectives)

(only for academic Programs)

✓= outcomes will be covered in the course; x= assessment data will be collected in the course.

	Assess and elucidate the theoretical and historical foundations of actuarial science and predictive analytics	Choose and defend the choice of mathematical models and technologies to conduct predictive analyses, financial evaluations, and risk management assessments	Compare and contrast the principles and procedures of various methodologies to implement practical and technical aspects of actuarial science and predictive analytics	Design and conduct a financial project, analyze the findings, and convey the results through professional oral and written reports and graphics that reflect actuarial science standards
Math 512 Theory of Interest			✓	



Math 533 Applied Regression and Time Series Predictive Modeling	✓ x		✓ x	
Math 538 Long-Term Actuarial Models I	✓	✓		✓ x
Math 542 Short Term Actuarial Models	✓	✓		✓
Math 548 Long-Term Actuarial Models II	✓	✓		✓
Math 585 Mathematical Finance		✓ x	✓ x	✓
Math 586 Risk Management & Financial Engineering		✓	✓	✓
Math 632 Computational Stochastics Modeling	✓		✓	
Math 634 Computational Spectral Analysis and Time Series	✓		✓	
Math 638 Applied Multivariate Statistical Analysis	✓		✓	
Math 639 Loss Models	✓	✓		✓
Math 643 Computational Methods of Mathematical Finance		✓	✓	
Math 644 Mathematics of Financial Derivatives		✓	✓	
	Assess and elucidate the theoretical and historical foundations of actuarial science and predictive analytics	Choose and defend the choice of mathematical models and technologies to conduct predictive analyses, financial evaluations, and risk management assessments	Compare and contrast the principles and procedures of various methodologies to implement practical and technical aspects of actuarial science and predictive analytics	Design and conduct a financial project, analyze the findings, and convey the results through professional oral and written reports and graphics that reflect actuarial science standards
Math 647 Predictive Analytics	✓ x		✓ x	✓ x
Math 641 Enterprise Risk Management		✓ x	✓	✓
Math 642 Credibility and Simulation	✓ x	✓ x		✓ x



Math 688 Topics in Actuarial Science and Risk Management	✓x	✓x	✓x	✓x
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Student Learning Outcomes (Objectives) & Assessment Measures

(academic programs and core courses)

	Measure 1 Brief Description of Measure	Measure 2 Brief Description of Measure
Assess and elucidate the theoretical and historical foundations of actuarial science and predictive analytics	Math 533 final exam Math 647 Predictive Analytics final exam Math 632 final exam or Math 634 final exam or Math 638 final exam or Math 642 Credibility and Simulation final exam	Students will be assessed on both oral presentation and written reports for the projects in the Math 688 Topics in Actuarial Science and Risk Management.
Choose and defend the choice of mathematical models and technologies to conduct predictive analyses, financial evaluations, and risk management assessments	Math 585 final exam Math 641 Enterprise Risk Management final exam Math 639 final exam or Math 634 final exam or Math 644 final exam or Math 642 Credibility and Simulation final exam	Students will be assessed on both oral presentation and written reports for the projects in the Math 688 Topics in Actuarial Science and Risk Management.
Compare and contrast the principles and procedures of various methodologies to implement practical and technical aspects of actuarial science and predictive analytics	Math 533 final exam Math 585 final exam Math 647 Predictive Analytics final exam Math 641 Enterprise Risk Management final exam	Pass SOA Exam P Pass SOA Exam FM
Design and conduct a financial project, analyze the findings, and convey the results through professional oral and written reports and graphics that reflect actuarial science standards	Math 533 Project Math 585 Project or	Students will be assessed on both oral presentation and written reports for the projects in the Math 688 Topics in Actuarial Science and Risk Management.

Student Learning Outcomes (Objectives) & Targeted Performance

(academic programs and core courses)

	Measure 1 Targeted Performance Level for Achievement	Measure 2 Targeted Performance Level for Achievement
Assess and elucidate the theoretical and historical foundations of actuarial science and predictive analytics	80% of correct answers = meet standard; 85% of correct answers = exceed standard. At least 80% of exams should score 80% or higher to indicate that the learning outcome has been met.	At least 80% of the students in the Math 688 Topics in Actuarial Science and Risk Management will be expected to obtain an 80% score for the written project. At least 80% of the students in the Math 688 presentation meet standard.



Choose and defend the choice of mathematical models and technologies to conduct predictive analyses, financial evaluations, and risk management assessments	80% of correct answers = meet standard; 85% of correct answers = exceed standard. At least 80% of exams should score 80% or higher to indicate that the learning outcome has been met.	At least 80% of the students in the Math 688 Topics in Actuarial Science and Risk Management will be expected to obtain an 80% score for the written project. At least 80% of the students in the Math 688 presentation meet standard.
Compare and contrast the principles and procedures of various methodologies to implement practical and technical aspects of actuarial science and predictive analytics	80% of correct answers = meet standard; 85% of correct answers = exceed standard. At least 80% of exams should score 80% or higher to indicate that the learning outcome has been met.	100% of the students graduate from the program pass at least two SOA exams including Exam P and Exam FM
Design and conduct a financial project, analyze the findings, and convey the results through professional oral and written reports and graphics that reflect actuarial science standards	80% in project grade = meet standard; 85% in project grade= exceed standard or All categories of the presentation must be "acceptable" or better = meet standard; Meet the standard + at least two categories rated better than "acceptable" = exceed the standard.	At least 80% of the students in the Math 688 Topics in Actuarial Science and Risk Management will be expected to obtain an 80% score for the written project. At least 80% of the students in the Math 688 presentation meet standard.

Student Learning Outcome & Collection Cycle

(academic programs and core courses)

	Measure 1 Collection Cycle	Measure 2 Collection Cycle
Assess and elucidate the theoretical and historical foundations of actuarial science and predictive analytics	May each year	May each year
Choose and defend the choice of mathematical models and technologies to conduct predictive analyses, financial evaluations, and risk management assessments	May each year	May each year
Compare and contrast the principles and procedures of various methodologies to implement practical and technical aspects of actuarial science and predictive analytics	May each year	May each year
Design and conduct a financial project, analyze the findings, and convey the results through professional oral and written reports and graphics that reflect actuarial science standards	May each year	May each year

EXAMPLE COURSE PLANS: Part-time Schedules

Part-time example 1 (2 courses in fall and spring, one course in summer)



<i>Meet Mathematical Admission Requirements</i>		
Year 1		
Fall	Spring	Summer
Math 512 Math 538	Math 533 Math 688 Topics in Actuarial Science and Risk Management	Math 642 Credibility and Simulation
Year 2		
Fall	Spring	Summer
Math 639 Math 641 Enterprise Risk Management	Math 638 Math 647 Predictive Analytics	Math 634

Part-time example 2 (2 courses in fall and spring, one course in summer)

<i>Meet Mathematical Admission Requirements</i>		
Year 1		
Fall	Spring	Summer
Math 585 Math 641 Enterprise Risk Management	Math 533 Math 688 Topics in Actuarial Science and Risk Management	Math 642 Credibility and Simulation
Year 2		
Fall	Spring	Summer
Math 639 Math 634	Math 643 Math 647 Predictive Analytics	Math 634



EXAMPLE COURSE PLANS: Full-time Schedules

Full-time example 1 (3 courses in fall and spring, one course in summer)

<i>Meet Mathematical Admission Requirements</i>		
Year 1		
Fall	Spring	Summer
Math 512 Math 538 Math 533	Math 638 Math 647 Predictive Analytics Math 688 Topics in Actuarial Science and Risk Management	Math 642 Credibility and Simulation
Year 2		
Fall	Spring	Summer
Math 634 Math 639 Math 641 Enterprise Risk Management		

Full-time example 2 (3 courses in fall and spring, one course in summer)

<i>Meet Mathematical Admission Requirements</i>		
Year 1		
Fall	Spring	Summer
Math 533 Math 542 Math 585	Math 643 Math 647 Predictive Analytics Math 688 Topics in Actuarial Science and Risk Management	Math 642 Credibility and Simulation
Year 2		
Fall	Spring	Summer
Math 634 Math 639 Math 641 Enterprise Risk Management		



100 Light Street, Floor B1
Baltimore, MD 21202-2559

Symeon Williams
Director, Actuarial CDO Product Reinsurance
Transamerica
100 Light Street
Baltimore, Maryland 21202

February 23, 2018

Dr. Min Deng
Professor and Director
Actuarial Science and Risk Management Program
Mathematics Department
Towson University
8000 York Road
Towson, MD 21252-0001

RE: Master of Science in Actuarial Science and Predictive Analytics

To Whom It May Concern:

I strongly support the Towson University Mathematics Department proposal for a new Master of Science in Actuarial Science and Predictive Analytics degree program.

Transamerica supports a stronger actuarial community in the Baltimore region. This new ASPA Masters is seen as a continuation of the evolution of Towson University's leadership in the Mid-Atlantic region. Given that we have a close history with Towson, we realize that this will create a special opportunity for the graduates as well as employers who can rely on a quality candidate and future leader with a unique skill set.

I have seen first-hand the close ties that Towson's Actuarial Science and Risk Management has with the community of employers. My personal experiences with Towson have been through two different perspectives. This was as Chairman of a Towson board and as a local employer.

As Chairman for the Towson Actuarial Science and Risk Management Advisory Board, I am proud to be part of this fantastic program. The recognition from the, Society of Actuaries of bestowing Towson as a Center of Actuarial Excellence continues to reward the hard work of the faculty, students, and community. As an advisory board, we strive to build on the momentum of these strong traditions and look to help in any way possible to further the strong ties that we have with Towson.



100 Light Street, Floor B1
Baltimore, MD 21202-2559

The ASRM board's charter states that our mission is to provide an external and durable structure of support for the program's success. We accomplish this through presentations, research topics, oncampus visits, on-site work visits, and general advice to the Actuarial Club and other alumni events to raise awareness and support. This also includes reviewing curriculum and advising how make the best possible experience for the student while incorporating employer and industry demands. Seeing this ASPA Masters being offered is a way that Towson proactively sets the trend for future actuarial professions.

Separate from the ASRM board's efforts, Transamerica has shown support through annual financial contributions on behalf of the Transamerica Foundation.

As head of the Actuarial Development Program for Transamerica's Baltimore location, I speak for all managers in saying that we have had great success building a pipeline of Towson students through our internships and full-time opportunities. The best demonstration of our appreciation for Towson really comes down to hiring and rewarding Towson students with careers at Transamerica. We currently have at least 7 Towson alumni from first year new hires to credentialed FSAs. Having just finished our most recent bonus and merit process, I can say that for many years in a row, we have the majority of Towson students in the exceeding expectations category.

We look forward to the programs evolution and the continued successes of the Towson faculty and actuarial student body. We will be there along the way to help in any way that we can.

Sincerely,

A handwritten signature in blue ink that reads "Symeon Williams". The signature is written over a horizontal line.

Symeon Williams



IFE Group, 1 Church Street, Suite 202, Rockville, MD 20850, U.S.A

Phone: (301) 309-6560
Fax: (301) 309-6562
www.ifegroup.com

December 19, 2017

Dr. Min Deng
Department of Mathematics
Towson University
8000 York Road
Towson, MD 21252

Dear Dr. Deng,

I am writing this letter to support of the proposed Master's Degree in Actuarial Science and Predictive Analytics. As the founder and CEO of Integrated Financial Engineering, I have been adamant about the need for dynamic curriculum based on constantly evolving financial engineering and actuarial science marketplace. After review the proposal, I am happy to see that the curriculum reflects the fast developing actuarial science and financial engineering fields. The proposed program combining the actuarial science with emerging data technology predictive analytics will be a unique Master Program in Maryland. I strongly believe that as the only Center of Actuarial Excellence (CAE) program in Maryland and one of 17 CAE programs recognized by Society of Actuaries in the nation, Towson University is able to make this proposed program a great success and supply graduates with the sophisticated skills urgently needed by the industry. Please keep me informed about the development of the Program.

Sincerely,

Tyler Yang, Ph.D.

Chairman and CEO



BOARD OF REGENTS

SUMMARY OF ITEM FOR ACTION,
INFORMATION, OR DISCUSSION

TOPIC: Towson University: Master of Science in Transformational Educational Leadership

COMMITTEE: Education Policy and Student Life

DATE OF COMMITTEE MEETING: Tuesday, May 15, 2018

SUMMARY: Towson University (TU) proposes to offer the Master of Science in Transformational Educational Leadership (TEL) program to address the evolution of roles for educational leaders, along with the newly-released state and national professional standards. The TEL program is proposing to transform the current TU Educational Leadership Track of the Master’s in Human Resource Development, with its over 20-year history of developing highly-effective educational leaders, into a standalone Master of Science in Transformational Educational Leadership.

According to the National Association of Secondary School Principals, the demand for school leaders will grow six percent by 2022 due to population increases and expected high turnover, as an increasing number of current leaders reach retirement age. Building on the strong foundation of the Educational Leadership Track, the curriculum and structures of the proposed Transformational Educational Leadership Master’s degree program will graduate well-prepared educational administrators to address the growing need for school leaders in public school systems in the state and region.

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

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

CHANCELLOR’S RECOMMENDATION: That the Education Policy and Student Life Committee recommend that the Board of Regents approve the proposal from Towson University to offer the Master of Science in Transformational Educational Leadership.

COMMITTEE RECOMMENDATION:

DATE:

BOARD ACTION:

DATE:

SUBMITTED BY: Joann A. Boughman 301-445-1992 jboughman@usmd.edu

MARYLAND HIGHER EDUCATION COMMISSION
ACADEMIC PROGRAM PROPOSAL

- NEW INSTRUCTIONAL PROGRAM
- SUBSTANTIAL EXPANSION/MAJOR MODIFICATION
- COOPERATIVE DEGREE PROGRAM
- WITHIN EXISTING RESOURCES or REQUIRING NEW RESOURCES



Fall 2018

Projected Implementation
Date

M.S.

Transformational Educational Leadership

Award to be
Offered

Title of Proposed Program

Main Campus

Face-to-Face

Location

Method of Delivery

Suggested HEGIS Code

13.0401

Suggested CIP Code

Instructional Leadership and Professional Development

Dr. Ronald Thomas

Department of Proposed
Program

Name of Department Head

Westley Forsythe

wforsythe@towson.edu

410-704-3312

Contact
Name

Contact E-Mail
Address

Contact Phone Number

President/Chief Executive Approved

04/04/2018

Date Endorsed/Approved by Governing Board

Date

Executive Summary

A. Centrality to institutional mission statement and planning priorities

The *Master of Science in Transformational Educational Leadership* operationalizes Towson University's mission to "prepare graduates who will serve as effective, ethical leaders" and to promote "leadership development."

Specifically, Priority 5 of the Towson University Strategic Plan, TU 2020, calls for the university to be "a model for leadership development":

"Towson University is rooted in our strong commitment to civic engagement, civility and ethics. The university supports personal and professional growth by recognizing and developing positive leadership philosophies and styles. Our primary goal is to instill in our students the qualities essential for outstanding, lifelong leadership in all aspects of their lives. We are also committed to increasing credit and noncredit opportunities in leadership development for our faculty, staff and students."

This emphasis is reflected in the following actions in TU's 2020 Plan:

- Enhance our efforts of working with the local school K-12 systems.
- Develop programs to support and help retain teachers in local school systems.

<https://www.towson.edu/about/mission/strategicplan.html>

The Educational Leadership track of the Masters in Human Resources has an over 20-year history of supporting Towson University's mission by developing highly-effective educational leaders through closed-site agreements with public school districts around the state. The program is approved by the Maryland State Department of Education (MSDE), accredited by the Council for the Accreditation of Educator Preparation (CAEP), and is well-recognized across the state for the quality of its leadership preparation as evidenced by the over 200 future school leaders currently enrolled in courses through closed-site agreements with area school districts.



B. Critical and compelling regional or Statewide need as identified in the State Plan

The Need

Due to the evolution of the roles of educational leaders, along with newly-released state and national professional standards, Towson University is proposing to transform the current Educational Leadership Track of the Master's in Human Resource Development into a, standalone *Master of Science in Transformational Educational Leadership*.

The proposed program formalizes a popular closed-site program requested by public school systems in the region. Towson University's closed-site offerings in the master's program for partner school districts currently enroll more than 200 students. According to the National Association of Secondary School Principals, the demand for school leaders will grow six percent by 2022 due to population increases, and turnover is expected to continue to be high, as an increasing number of current leaders reach retirement age. Maryland reflects these data, projecting a need for 524 building level administrators requiring Administrator 1 certification in 2017-2018 (Maryland's P12 Dashboards, 2017). According to the P-12 Longitudinal Data System, Towson University is the public state institution that prepares the highest number of principals each year. Recent program graduates are leaders in every one of the state's 24 school districts.

Over the last several years, there has been a substantial increase in societal expectations for America's education system to equip all graduates to be college and career ready. Report after report -- including the federal Every Student Succeeds Act (ESSA) -- has concluded that school leaders are essential to improving student achievement and narrowing persistent achievement gaps between students in underserved communities and their economically advantaged peers. In fact, school leaders have been found to be the second most important school-level factor associated with student achievement -- right after teachers (Lockwood et al, 2010).

As student-learning expectations have intensified, so have the responsibilities of school leaders. While 20 years ago, the main role of principals was as managers of school campuses, they are now expected to be transformational leaders, with the ability to navigate complex school communities through intricate and lengthy change processes. This requires leaders to possess significantly

different and more advanced skill sets, such as the deep understanding of and the ability to implement extensive stakeholder engagement, distributed leadership, evidence-based decisionmaking, curricular alignment around rigorous standards, culturally relevant curriculum, and social and emotional learning. Principals must now be the “lead learners” of their schools, as they pose questions, engage staff in inquiry, provide resources, and celebrate successes.

Report after report -- including the federal Every Student Succeeds Act (ESSA) -- has concluded that school leaders who possess these knowledge and skills are essential to improving student achievement and narrowing persistent achievement gaps between students in underserved communities and their economically advantaged peers.

For example, the Wallace Foundation has, for over a decade, sponsored rigorous research on school leadership. In a seminal report, the foundation highlighted an important message from the research: “A particularly noteworthy finding is the empirical link between school leadership and improved student achievement” (Wallace Foundation, 2011, p. 3). According to the foundation:

“Education research shows that most school variables, [when] considered separately, have at most small effects on learning. The real payoff comes when individual variables combine to reach critical mass. Creating the conditions under which that can occur is the job of the principal” (Wallace Foundation, 2011, p. 2).

After six years of related research, Louis, Leithwood, Wahlstrom, and Anderson (2010) concluded that “leadership is second only to classroom instruction as an influence on student learning. . To date we have not found a single case of a school improving its student achievement record in the absence of talented leadership. . The total (direct and indirect) effects of leadership on student learning account for about a quarter of total school effects.”

Research also shows that the demonstrated effects of successful leadership are considerably greater in schools that are in more difficult circumstances. Indeed, Leithwood, Louis, Anderson, and Wahlstrom (2004) found that “there are virtually no documented instances of troubled schools



being turned around without intervention by a powerful leader. Many other factors may contribute to such turnarounds, but leadership is the catalyst.”

Ways this Master’s Program Will Address Maryland’s Demonstrated Needs

The curriculum and structures of the proposed Transformational Educational Leadership Master’s degree program will address Maryland’s growing need for well-prepared building level administrators by emphasizing the following priorities identified in the *2009 Maryland State Plan for Postsecondary Education* (pages 28-38):

- Prepare students to be culturally competent in Maryland’s public schools
- Focus on issues of culture, diversity, and equity
- Engage students as active participants in their learning
- Establish learning goals and objectives (standards), with multiple paths to achieving them
- Individualize the pace, pedagogy, and curricular design of learning
- Use formative assessment, in ongoing feedback loops within courses, to help students identify their learning gaps and weaknesses so adjustments can be made to ensure that every students’ educational foundation is solid as they progress through the program
- Triangulate end-of-course or summative assessment data with other evidence to determine the outcomes of student-centered learning and identify adjustments at the student, faculty, department, and institution levels that can be made to increase instructor and student learning
- Work to eliminate learning gaps that may result in subsequent and significant educational roadblocks
- Include extensive preparation in school-based clinical internship activities from day one of the program

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

There are currently an estimated 240,000 principals in the United States. According to the Sokanu Career Service, the national demand for school principals will grow by 5.8 percent by 2024. Sokanu projects moderate career opportunities in principalships for the

foreseeable future. Over the next 10 years, it is expected that the United States will need 83,000 principals. That number is based on 14,000 additional principals and the retirement of 69,800 existing principals.

Sokanu projects that available educational leadership positions will increase due to:

- Additional school-aged children in America's schools
- High leadership turnover, as an increasing number of current leaders reach retirement age
- The reluctance of some teachers to aspire to leadership roles because of increased societal pressures and accountability for both teacher and student performance
- The perceived insufficient pay for the significant responsibilities involved.

<https://www.sokanu.com/careers/principal/job-market/#job-outlook>

Maryland reflects these national data, projecting a need for 524 building level administrators requiring Administrator 1 certification in 2017-2018 (Maryland's P12 Dashboards, 2017). According to the P-12 Longitudinal Data System, Towson University is the public state institution that prepares the highest number of principals each year through our closed cohort programs. Recent graduates are leaders in every one of the state's 24 school districts.



Table 1: Educational Leadership program enrollments 2012-2016

School Name	Degree Level	Program Name	CIP	2012	2013	2014	2015	2016
Bowie State University	MASTERS	ELEMENTARY & SECONDARY SCHOOL ADMIN	130401	54	37	49	38	16
Coppin State University	MASTERS	CONTEMPORARY EDUCATIONAL LEADERSHIP	130401	0	3	3	10	8
Salisbury University	MASTERS	EDUCATIONAL LEADERSHIP	130401	42	36	46	37	32
Univ. of MD, College Park	MASTERS	EDUCATION POLICY & LEADERSHIP	130401	29	19	14	9	5
Morgan State University	MASTERS	EDUCATIONAL ADMINISTRATION & SUPERV	130401	9	5	22	33	33
Hood College	MASTERS	EDUCATIONAL LEADERSHIP	130401	105	97	110	110	118
Loyola University Maryland	MASTERS	EDUCATIONAL LEADERSHIP	130401	62	93	78	100	144
McDaniel College	MASTERS	EDUCATIONAL LEADERSHIP	130401	54	45	40	43	47
Total annual enrollments				355	335	362	380	403

D. Reasonableness of program duplication

To meet more effectively the needs expressed by our local school districts and the requirements of increasingly rigorous national leadership standards, the proposed program builds on the strengths of the faculty and existing coursework in the current education leadership track and closed-site offerings. A unique aspect of the proposed program that differentiates it from others in the state and directly addresses the evolving role of school leaders, will be the ability of graduates to obtain a Post Baccalaureate Certificate (PBC) in a specialized content area as part of the program of study. The 36-credit Master's degree will contain a required core of 18 credits which consists of the courses required for MSDE Administrator 1 certification. The remaining 18 credits can be satisfied with a range of elective courses, including options for the completion of Post Baccalaureate

Certificates (PBC). This option will allow future leaders to select areas of specialization that best meet their individual needs.

Table 2: Educational Leadership program graduations 2012-2016

School	Award level	Program name	CIP	2012	2013	2014	2015	2016
Bowie State University	MASTERS	ELEMENTARY & SECONDARY SCHOOL ADMIN	130401	4	10	9	8	4
Coppin State University	MASTERS	CONTEMPORARY EDUCATIONAL LEADERSHIP	130401	0	0	1	0	1
Salisbury University	MASTERS	EDUCATIONAL LEADERSHIP	130401	11	21	14	14	10
Univ. of MD, College Park	MASTERS	EDUCATION POLICY & LEADERSHIP	130401	43	7	6	9	2
Morgan State University	MASTERS	EDUCATIONAL ADMINISTRATION & SUPERV	130401	5	5	3	1	10
Hood College	MASTERS	EDUCATIONAL LEADERSHIP	130401	36	34	22	33	23
Loyola University Maryland	MASTERS	EDUCATIONAL LEADERSHIP	130401	10	8	20	28	16
McDaniel College	MASTERS	EDUCATIONAL LEADERSHIP	130401	17	17	14	13	10
Total annual graduations				126	102	89	106	76

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

It is not anticipated that the offering of this erstwhile ‘track’ within the M.S. in Human Resources Development as a stand-alone M.S. in Transformational Educational Leadership will affect HBIs’ identity.



F. Relevance to high-demand programs at Historically Black Institutions (HBIs)

The proposed program is meeting an existing student demand, via a track in the M.S. in Human Resources Development. This transition will continue to accommodate current student demand and we do not anticipate a significant impact on current enrollment numbers or on student profile.

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

This unique program to develop transformational preK-12 educational leaders will focus on national and state leadership needs to:

- Address priorities central to the mission and strategic plan of Towson University
- Meet increased expectations for all k-12 students to be college and career ready upon graduation
- Narrow persistent achievement gaps between students in underserved communities and their economically advantaged peers
- Meet the demands for increasing numbers of school leaders
- Equip leaders who are willing and who have the knowledge, skills, and dispositions that will enable them to be successful as school leaders in challenging situation

Admission Requirements for the Program:

Entering students should have attained teacher tenure status and have at least three years of successful teaching experience.

In addition, all candidates must file the following documentation with the Graduate School:

- Transcripts from prior institutions that indicate an earned GPA of 3.0 for full admission to the Master’s program, or, an earned GPA of 2.8 for conditional admission to the Master’s program
- Two letters of recommendation, one of which should be from an administrator and speak to the leadership potential of the candidate
- A personal statement from the candidate indicating the intention to address:
 - Commitment to the profession
 - Caring for the success of all students
 - Collaboration with families and community

Course Content

See the attached Appendix A, “ILPD Courses Proposed for Transformational Educational Leadership Master’s Degree.”

Alignment with Leadership Standards

See the attached document, “Alignment of Proposed Transformational Educational Leadership Program with the national professional standards by the PSEL and NELP Standards.”

Proposed courses are aligned with both the Professional Standards for Educational Leaders (PSEL) for established school leaders and the National Educational Leadership Preparation (NELP) Standards for Building Level Leaders. NELP Standards specify what novice leaders and program graduates should know and be able to do following completion of a high-quality leadership preparation program.

Assessment of Leadership Standards

In the 2016-17 academic year, the Instructional Leadership and Professional Development completed a major two-year transition to standards-based scoring for all core courses in our extensive adjunct program. Required performance tasks were developed for every core course, so that each NELP competency that makes up the standards is assessed at least twice within the required courses. This means that the ILPD Department is collecting and analyzing data on 31 separate leadership competencies.



Consistent 0-3 scoring rubrics were developed for every competency within each standard. These scoring rubrics are used every time the course is taught, and student-specific results at the competency level are reported to students and to the department. Many instructors also developed instructional rubrics that broke tasks into smaller component parts, providing even more granular and specific expectations and feedback.

These steps enable the department to provide very focused feedback to students within each course, as well as to analyze student proficiency, as a department, at a precise level so that curricular and instructional adjustments can be targeted to the areas of greatest need.

ILPD faculty are involved in a variety of ways to identify and, more importantly, to act upon student proficiency data:

- Faculty members submit data tables at the conclusion of each core course summarizing student performance on the standards' competencies that are assessed in the course.
- Data are organized into data tables by the departmental graduate assistants for each standard and each program site.
- Teams of faculty members who taught the course review the data, led by the course coordinator.
- Student proficiency data in the courses are triangulated with results on the national licensure assessment for school principals (SLLA), the departmental comprehensive examination, student evaluations and focus groups, and instructor perception data.
- Suggestions for curricular, assessment, or instructional modifications are discussed by the department.
- Content from courses are modified based on the results of these discussions.

Student performance in our extensive closed-site cohort-based program has, in the past, been very good on the core course assessments. However, the department realized two years ago that instruction was not where it needed to be if future educational leaders will be prepared to address the urgent social justice issues of our time so that all prek-12 students receive a rigorous and personalized education by highly-qualified teachers and effective leaders.

Data analysis revealed that particular focus needed to be placed on these competencies:

- STANDARD 2, COMPONENT 3: Model essential educational values of democracy, community, individual freedom and responsibility, equity, social justice, and diversity
- STANDARD 3, COMPONENT 1: Develop, implement, and evaluate equitable guidelines, procedures and decisions that ensure each stakeholder is treated fairly, respectfully, and with an understanding of culture and context.
- STANDARD 3, COMPONENT 2: Ensure that each student has equitable access to effective teachers, learning opportunities, academic, social and behavioral support, and other resources necessary for success.
- STANDARD 3, COMPONENT 4: Build and maintain a school culture that ensures each student and family is treated fairly, respectfully, in a responsive manner and free from biases associated with characteristics such as race, culture and language, gender, disability, or special status.
- STANDARD 5, COMPONENT 2: Engage families, community, and school personnel in strengthening student learning in and out of school.
- STANDARD 5, COMPONENT 3: Build and sustain productive partnerships with communities and public and private sectors to promote school improvement and student development.
- STANDARD 5, COMPONENT 4: Advocate for the needs and priorities of the school, district, students, families, and the community.

To begin this improvement initiative in the 2016-17 school year, the department conducted extensive professional development focusing on the personal beliefs and life experiences of department members in terms of race, gender, and diversity issues. The goal was to enhance the cultural proficiency of faculty members and to begin to identify opportunities within the leadership curriculum to infuse relevant concepts.

Building on faculty members' personal growth experiences in 2016-17, the ILPD Department theme for 2017-18 is "Leading with an Equity Focus." Curriculum development activities are building on the learnings from last year and identifying specific actions that leaders can take in increasingly diverse educational environments to promote equitable, inclusive, and accessible school cultures and determining how these actions can be infused into and assessed in all required and elective courses.



The department is increasing rigor in several ways:

- Concurrent with last year’s professional learning, all student assessments were revised in 2016-17 to reflect the new and more rigorous national leadership standards: the National Educational Leadership Preparation (NELP) Standards.
- As called for in these standards, all required performance tasks are authentic work of school leaders, with required reflection and follow-up improvement.
- Curriculum in many core courses has been revised to address the areas of need identified above, as identified by the assessment data.
- The department is developing “look fors” to accompany the standards-based rubrics so that the scoring of these tasks will be more consistent and more rigorous among all full-time and adjunct faculty members who teach the courses.

Completion of COMAR-required courses

This program has embedded within the Master’s program the courses required for completers to qualify for Administrator 1 certification from the Maryland State Department of Education. **H.**

Adequacy of articulation Not applicable.

I. Adequacy of faculty resources

Narrative:

The Instructional Leadership and Professional Development (ILPD) Department includes an impressive array of individuals with extensive school and school district leadership expertise and university teaching experience.

Faculty Resources					
	FTE	Highest Degree Earned/Field of Study	Rank	Status (Fulltime or Parttime)	Courses Teaching

Existing Faculty					
Ronald S. Thomas	1.0	Ph.D./ Curriculum Theory	Interim Department Chair/Lecturer	FT	ILPD 716, 667, 740, 614, 797
Kathleen Reilly	1.0	Ph.D.	Assistant Professor	FT	ILPD 675, 739, 742, 743, 744, 797
Jessica Shiller	1.0	Ph.D.	Assistant Professor	FT	ILPD 603, 667, 739, 742
Carla Finkelstein	1.0	Ph.D./ Curriculum and Instruction	Graduate Director/ Assistant Professor	FT	ILPD 667, 742, 743, 781
Brenda Conley	1.0	Ed.D./Human Resource Development	Clinical Professor	FT	ILPD 614, 667, 668, 675, 716, 740, 744, 797
Arlene Harrison	1.0	Ph.D.	Clinical Professor	FT	ILPD 667, 740, 716, 797
Faculty Resources					



	FTE	Highest Degree Earned/Field of Study	Rank	Status (Fulltime or Parttime)	Courses Teaching
Marilyn Nicholas	1.0	Ed.D./ Elementary Education	Lecturer/ Former Professor	FT	ILPD 668, 781, 797
Theodore Haynie	1.0	Ed.D.	Lecturer	FT	ILPD 667, 716. 740, 797
Deborah Hunter	.4	J.D.	Adjunct Professor	PT	ILPD 603
Thomas Evans	.4	M.Ed.	Adjunct Professor	PT	ILPD 716, 797, 745
Peter Carpenter	.4	Ed.D.	Adjunct Professor	PT	ILPD 742, 668, 781
Ernesto Diaz	.2	M.S.	Adjunct Professor	PT	ILPD 716, 603
Charles Ridgell	.2	Ed.D.	Adjunct Professor	PT	ILPD 667, 781, 614

(Note: Faculty resources must address minimum requirements detailed in COMAR 13B.02.03.11 and 13B.02.03.20 (1) at least 50% of the total semester credit hours within the program shall be taught by full-time faculty; and 2) at least 1/3 of the courses offered in an off-campus program shall be taught by full-time faculty of the parent institution.)

J. Adequacy of library resources

Towson University's library resources are more than adequate. The Albert S. Cook Library's collection includes more than 600,000 print books and over 190,000 electronic books. In addition, students also have access to over 200 electronic databases and 40,000 electronic and print journals. The ILPD Department has, on a yearly basis, suggested that the library purchase texts and subscription to periodicals that directly support the transformational leadership curriculum.

K. Adequacy of physical facilities, infrastructure and instructional equipment

The physical facilities, infrastructure, and instructional equipment of the College of Education in Hawkins Hall and the Psychology Building are sufficient for this program.

L. Adequacy of financial resources with documentation

The program, being an existing track, does not require significant new resourcing. The expenditures outlined in table 2 below illustrate existing faculty and staff salaries and benefits in the Department of Instructional Leadership and Professional Development.

M. Adequacy of provisions for evaluation of program

The proposed program will be evaluated on an annual basis by the College as well as by the University. It will also be evaluated every seven years at the state level by University System of Maryland (USM) and the Maryland State Department of Education. The program will also undergo review every seven years by the Council for the Accreditation of Educator Preparation (CAEP), the national accreditor for education programs.

In November each year, the program will submit the *Yearly Assessment System Update & Data Analysis Report (YASU/DAR)* to the College for review. The YASU/DAR is a report on the assessment results, analysis of those results, progress toward program goals, and any new goals and/or changes for the upcoming year. The College assessment team reviews the reports and sends feedback to the department. The YASU/DAR is then forwarded on to the University Office of Assessment for University level review.



In January, the Office of Assessment hosts “Assessment Day” where all programs present data and analysis on their program learning outcomes. Faculty from across the University participate in this peer review process and utilize a rubric developed by the University Assessment Council’s Subcommittee on Student Affairs Assessment to evaluate program reports. Results are then synthesized and recommendations are submitted to the University Assessment Council for approval. This data is used for continuous program improvement as part of the Middle States Accreditation process.

The University System of Maryland (USM) requires a program review by external reviewers for all academic degree programs every seven years. The 7-year program review process is extensive and consists of an internal self-study of each program within the context of the discipline as a whole and the department in which it resides. Each review must include feedback from an external reviewer and a comprehensive plan for improvement.

N. Consistency with the State’s minority student achievement goals

Towson is resolutely committed to playing its role in securing the state’s minority student achievement goals. The [Center of Student Diversity \(CSD\)](#) as established to aid the institution in its efforts to foster inclusion, collaboration, and relationship building. The center provides academic, social, and transition support for underserved students and promotes exchange and dialogue between individuals of diverse backgrounds and lifestyles.

CSD, housed in the Division of Student Affairs, supports the access and academic success of historically under-represented groups through programs and services that enhance the student experience.

Towson’s [Career Center](#) recognizes the importance of racial and ethnic diversity and is committed ourselves to providing resources for the social and professional development of our minority students.

The President, Dr. Schatzel, has publicly and prominently articulated the importance of diversity to Towson’s role, purpose, and mission, including recently in an [open editorial in the Baltimore Sun](#).¹

¹ *The Baltimore Sun*, February 1, 2018, retrieved on April 18, 2018 from <http://www.baltimoresun.com/news/opinion/readersrespond/bs-ed-rr-towson-diversity-letter-20180201-story.html>

Further demonstrating the institution's commitment to minority student achievement goals, Towson 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.²

Towson'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.'³ President Schatzel's *Presidential Priorities* are implementing this objective, most notably via the establishment of the Office of Inclusion and Institutional Equity.⁴

O. Relationship to low productivity programs identified by the Commission

N/A

P. If proposing a distance education program, please provide evidence of the [Principles of Good Practice](#)

Not Applicable

Q. Program Resources and Expenditures Table

It should be noted that the expenditures outlined in the 'expenditures table' below reflect the total Department of Instructional Leadership and Professional Development expenditures. It is not

² CBS Baltimore, retrieved on April 18, 2018 from <http://baltimore.cbslocal.com/2017/06/08/towson-stem-grant/>

³ <https://www.towson.edu/about/mission/strategicplan.html>

⁴ <https://www.towson.edu/about/administration/president/priorities/campus.html>



practical to disaggregate expenditures assigned specifically to this program given the contribution of curriculum, faculty, student support services and advising to more than one program in the department.

Additionally, it is important to consider that the current track and proposed Master's does/will support these committed and ongoing expenditures.



Resources

Resources Categories	(Year 1)	(Year 2)	(Year 3)	(Year 4)	(Year 5)
1. Reallocated Funds¹	\$0	\$0	\$0	\$0	\$0
2. Tuition/Fee Revenue²	\$915,486	\$933,796	\$952,472	\$971,521	\$990,951
a. Annual Full-time Revenue of New Students	n/a	n/a	n/a	n/a	n/a
Number of Full-time Students	n/a	n/a	n/a	n/a	n/a
Annual Tuition Rate	n/a	n/a	n/a	n/a	n/a
Subtotal Tuition	n/a	n/a	n/a	n/a	n/a
Annual Fees	n/a	n/a	n/a	n/a	n/a
Subtotal Fees	n/a	n/a	n/a	n/a	n/a
Total Full-time Revenue of New Students	n/a	n/a	n/a	n/a	n/a
b. Annual Part-time Revenue	n/a	n/a	n/a	n/a	n/a
Number of Part-Time Students	n/a	n/a	n/a	n/a	n/a
Credit Hour Tuition Rate	n/a	n/a	n/a	n/a	n/a
Annual Fees Per Credit Hour	n/a	n/a	n/a	n/a	n/a
Annual Credit Hours Per Student	n/a	n/a	n/a	n/a	n/a
Subtotal Tuition	\$627,000	\$639,540	\$652,331	\$665,377	\$678,685
Subtotal Fees	\$288,486	\$294,256	\$300,141	\$306,144	\$312,267
Total Part Time Revenue	n/a	n/a	n/a	n/a	n/a



3. Grants, Contracts & Other Sources ³	\$0	\$0	\$0	\$0	\$0
4. Other Sources	\$0	\$0	\$0	\$0	\$0
TOTAL (Add 1 - 4)	\$915,486	\$933,796	\$952,472	\$971,521	\$990,951

Expenditures

Expenditure Categories	(Year 1)	(Year 2)	(Year 3)	(Year 4)	(Year 5)
1. Total Faculty Expenses	\$1,141,434	\$1,164,263	\$1,187,548	\$1,211,299	\$1,235,525
(b + c below)					
a. #FTE	12.00	12.00	12.00	12.00	12.00
b. Total Salary	\$862,833	\$880,090	\$897,691	\$915,645	\$933,958
c. Total Benefits	\$278,601	\$284,173	\$289,857	\$295,654	\$301,567
2. Total Administrative Staff Expenses	\$57,572	\$58,723	\$59,898	\$61,096	\$62,317
(b + c below)					
a. #FTE	1.00	1.00	1.00	1.00	1.00
b. Total Salary	\$40,831	\$41,648	\$42,481	\$43,330	\$44,197
c. Total Benefits	\$16,741	\$17,076	\$17,417	\$17,765	\$18,121
3. Total Support Staff Expenses	\$0	\$0	\$0	\$0	\$0
(b + c below)					
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	\$23,596	\$23,596	\$23,596	\$23,596	\$23,596
TOTAL (1-7)	\$1,222,602	\$1,246,582	\$1,271,042	\$1,295,991	\$1,321,439

¹ Whenever reallocated funds are included among the resources available to new programs, the following information must be provided in a footnote: origin(s) of reallocated funds, impact of the reallocation on the existing academic program(s), and manner in which the reallocation is consistent with the institution's strategic plan.

² This figure should be a realistic percentage of tuition and fees which will be used to support the new program. Factors such as indirect costs linked to new students and the impact of enrolling continuing students in the new program should be considered when determining the percentage.

³ Whenever external funds are included among the resources, the following information must be provided in a footnote: source of the funding and alternative methods of funding the program after the cessation of external funding.



Appendix A

**TOWSON UNIVERSITY DEPARTMENT OF INSTRUCTIONAL
LEADERSHIP AND PROFESSIONAL DEVELOPMENT**

TRANSFORMATIONAL EDUCATIONAL LEADERSHIP

Course Descriptions

Required:

ILPD 603: LEGAL AND ETHICAL ISSUES IN EDUCATION (3)

Highlights the major legal and ethical issues in education affecting teachers, administrators, students, and parents. Emphasis is placed on gaining a solid foundation of the framework of the U.S. legal system and demonstrating adeptness at applying this legal knowledge through the lens of ethical decision-making. Participants study U.S. Supreme Court cases affecting education and propose leadership action plans that model principles of self-awareness, inquiry, and restorative practices to resolve common legal and ethical dilemmas that arise during the operation of a school.

**ILPD 667: CURRICULUM AND ASSESSMENT FOR INSTRUCTIONAL
DEVELOPMENT (3)**

Examines the historical, philosophical, and psychological foundations of school curriculum and assessment from a leader's perspective. Using an equity lens, participants determine the political, social, and economic forces affecting curriculum development currently and in the past; examine its patterns of organization; and identify school practices that can improve students' academic, social, and emotional outcomes. Participants create curriculum and assessment plans that reflect an equity perspective and analyze a current issue in depth to develop a clearly stated position that they could use to advocate as school leaders to a decision-making body.

ILPD 716: LEADERSHIP OF THE SCHOOLS (3)

Focuses on the creation of a vision for an equitable school, using the latest research on high-quality school leadership and facilitating change. Attention centers on strategies that develop culturally proficient and caring school cultures; engage staff, students, parents, and community members in increasing learning for all; strengthen school capacity for positive and productive change; build systems that lead to instructional excellence; and draft personal leadership vision statements.



ILPD 740: EVIDENCE-BASED DECISION MAKING FOR CURRICULUM AND INSTRUCTION (3)

Considers how to identify, collect, analyze, and use a variety of classroom, school-based, state, and national sources of evidence to measure long-term program effectiveness and to guide instructional decision making by teachers. Participants identify and apply ethical components of data collection, analysis, and use; describe the conditions needed in a school and district for effective collaborative data analysis to occur; analyze and use data protocols and learning management systems; and disaggregate and triangulate the results of a variety of norm- and standards-referenced assessments to be addressed in a school improvement plan.

ILPD 781: SEMINAR IN SUPERVISION (3)

Examines the role of educational leaders in improving classroom teaching and student learning by focusing on supervisory and evaluative practices and techniques that promote the professional growth and development of teachers while also fostering teacher leadership and collegiality. Participants develop a vision, aligned with the mission of their institutions, for effective teaching practices likely to ensure personalized, inclusive, individualized, and equitable learning experiences for all students. Based on contemporary research on human learning, participants generate strategies for fostering high expectations for students' learning and the teaching practices to support students in meeting them. Based on specific criteria for high-quality teaching, participants describe, analyze, and assess a series of actual teaching episodes in their school and provide feedback to colleagues that promotes their continuous improvement and effective teaching. Participants justify their position on a current controversial supervisory or evaluation issue, based on evidence that they amass throughout the course.

ILPD 797: INTERNSHIP IN INSTRUCTIONAL LEADERSHIP (3)

Provides a 300-hour collaborative experience involving school districts, the university, and interns in the practical application of the knowledge, skills, and dispositions needed to be successful as emerging instructional leaders. Interns interact with students, teachers, administrators, parents, and community members in multiple clinical settings and situations as they progress from observer to leader in applying learned skills, according to a personalized trajectory based on their projected leadership role and an analysis of their current leadership strengths and needs.

Electives:

ILPD 614: CLASSROOM ASSESSMENT FOR INSTRUCTIONAL LEADERS (3)

Focuses on understanding and applying current research-based principles of curricular and assessment alignment around prioritized content standards and strategically using a variety of formative and summative assessment strategies to support student and teacher learning. The instructional approach models best practices in professional learning community development and implementation.



ILPD 668: LEADERSHIP AND GROUP DYNAMICS (3)

Centers on leadership practices around organizing and supporting teams and professional learning communities in schools, emphasizing creating a welcoming climate for collaboration and the incorporation of adult learning concepts; professional growth; group engagement; student, parent, and community voice; and effective two-way communication strategies.

ILPD 670: SPECIAL TOPICS IN INSTRUCTIONAL LEADERSHIP (3)

Focuses on an in-depth study of a selected topic in instructional leadership. The specific requirements and prerequisites of the course will vary with each topic. Recent topics studied have included professional writing and transforming schools through cultures centering on excellence and equity.

ILPD 675: LEADERSHIP AND ACTION RESEARCH (3)

Develops an understanding of concepts and methods of practitioner action research. The course structures participants' experiences as they design an action research study, while also exploring their responsibility as leaders to build the capacity of others to conduct similar studies on issues of importance to them. Students design their research based on well-articulated problems, which they identify from reflections on their school experiences. They review and critique educational literature relevant to the problem; collect and analyze data about the problem in context; devise an action plan to address the problem; and write and present a persuasive, credible research proposal with recommendations for improved teaching and learning in their schools. Throughout these processes, other participants serve as "critical friends" to classmates, questioning, providing feedback, and gaining additional insight into the action research process. Participants are encouraged to be aware of and to attempt to influence related educational issues and policies of importance in the broader educational arena.

ILPD 739: LEADERSHIP THEORY AND PRACTICE FOR EDUCATIONAL LEADERS (3)

Focuses on the theoretical and applied foundations of leadership concepts, principles, practices, and competencies; the application of these models of leadership to the educational context; and the concept of schools and districts as nimble learning organizations capable of continuous adjustments and advancing to higher performance levels based on emerging evidence.

ILPD 742: TRANSFORMATIONAL LEADERSHIP AND PROFESSIONAL DEVELOPMENT (3)

Addresses the basic components of transforming schools through embedded, coherent, integrated, and engaging professional learning for individuals and groups. Focus is on implementing strategies of effective capacity building and identifying successful instructional practices and taking them to scale in a school or district. Participants inquire into relevant school-based issues and formulate improvement strategies based on models examined throughout the leadership program.



ILPD 743: LEARNING COMMUNITIES AND ORGANIZATIONAL CHANGE (3)

Examines the theoretical underpinnings of individual and organizational learning in an era of rapid change, with emphasis on leaders' roles in planning and instituting reflective, focused, and collegial professional learning communities, based on a dedication to inquiry and ongoing reflective dialogue.

ILPD 744: INTERPERSONAL RELATIONS AND GROUP DYNAMICS: THEORY, RESEARCH, AND APPLICATION (3)

Addresses the theoretical and applied concepts, practices, and competencies related to understanding group dynamics and interpersonal relations in complex organizations such as schools; the integration of theory and practice in applying conceptual models of group behavior to leadership in educational settings; and self-awareness and developmental activities to improve interpersonal relationships.

ILPD 745: SCHOOL BUDGETING AND FISCAL PLANNING (3)

Focuses on the development of budgets aligned with the school vision, mission, and improvement plans; the implementation of financial management systems and the evaluation of results; and strategies for long- and short-term fiscal planning at the departmental, school, district, and state levels.

REED 650 SOCIAL, CULTURAL, AND CURRICULAR CONTEXTS FOR SECOND LANGUAGE LEARNING (3)

Social and cultural contexts of second language learners' lives and the different types of curricular programs for second language literacy learning. Models of literary instruction found in English for Speakers of Other Languages (ESOL), Bilingual, Dual Immersion and content area focused settings are explored. Possible relationships between language arts instructors, ESOL, and Reading Specialists are examined. May be repeated for an additional 3 units if taken as short-term study abroad course.

REED 651 INSTRUCTION AND ASSESSMENT FOR SECOND LANGUAGE LEARNERS (3)

Course participants will be invited to critically examine approaches to second language development and assessment for children congruent with recent research in second language acquisition in children. Class members will read professional literature framing second language acquisition and discuss strategies for implementing sound theoretical practice within the classroom. How to provide appropriate instruction based on informal and formal assessment results for K-12 English Language Learners will be major focus of this course.

REED 652 INTRODUCTION TO LINGUISTICS FOR TEACHERS OF LANGUAGE AND LITERACY (3)

Introduction to the basic principles and concepts of the study of language and its relevancy to teachers of language and literacy. Students will develop foundational knowledge in the areas of grammatical competence (phonology, morphology, syntax, semantic, pragmatics), spoken and



written discourse, language variation, first and second language acquisition, and language processing. The course will equip students to use linguistic analysis to conduct inquiries that address issues or concerns about the use, development, assessment and/or teaching of language and literacy in classrooms or other educational settings.

REED 665 TEACHING READING & WRITING IN THE CONTENT AREAS K-12 (3)

Examination of interrelationship of reading and writing, and their roles in instruction of content areas, K-12, with an emphasis on working with English learners.

ISTC 667: INSTRUCTIONAL DEVELOPMENT (3)

Overview and application of the instruction systems approach for problem solving and the design of instruction. Media selection, needs assessment, prototyping, implementation, and evaluation of instructional systems.

ISTC 717 DISTANCE EDUCATION IN THEORY AND PRACTICE (3)

Teaching strategies, technologies, learning styles and instructional design principles with relation to distance-based and online learning are introduced and discussed. Contemporary research, theories, practices, and critical issues relevant to the field are addressed through an online learning environment.

ISTC 655 MULTIMEDIA DESIGN (3)

Introduction and overview to digital media (multimedia) in instructional settings. A laboratory task enables students to develop original media, gather and edit digital media assets, integrate their products into a computer presentation program and output their results in a variety of digital and analog media formats.

ISTC 767 ADVANCED THEORY AND INSTRUCTIONAL DESIGN (3)

Designed to extend the student's understanding of instructional design, to include advanced models, non-linear models, advanced assessment and evaluation techniques, and to provide a glimpse of instructional design in the years to come. A comprehensive course project will be completed using such techniques and theories.

ISTC 541 FOUNDATIONS IN INSTRUCTIONAL TECHNOLOGY (3)

This introductory course provides an overview of the field of instructional technology. This course focuses on helping students to develop an awareness and understanding of the theories and philosophies driving the field. In addition, this course will explore common computer-related technologies used within most learning environments.

ISTC 731 THEORY AND PRACTICE FOR INTEGRATING DIGITAL RESOURCES INTO LEARNING AND TEACHING (3)

Focuses on current theoretical perspectives on learning that underlies decisions about technology integration in diverse educational settings. Students will examine recent technological innovations surrounding technology integration for teaching and learning; analyze effective design of computer-based instructional materials; create and evaluate case studies relating to technology integration, and critically examine their own personal and professional values as an aspect of their work as educator and instructional designers.



ISTC 674 SPECIAL TOPICS IN INSTRUCTIONAL TECHNOLOGIES (3)

Topics selected from the instructional technology field which are innovative and of immediate concern to existing instructional needs.

SPED 605: Working with Families of Students with Disabilities (3)

This course focuses on the role of the family system and the impact of having a child with a disability on that system. Students will receive practice in strategies for effective communication and family support. Students will also gain an understanding of the information families need to support their child's development and achievement in the educational process and how to provide needed resources to empower families to successfully advocate for their child.

SPED 607: Curriculum and Methods of Classroom Management for Students with Disabilities K-12 (3)

This course addresses research and best practices for interventions and management strategies that support positive behaviors of students with disabilities.

SPED 631: Classroom Strategies & Interventions for Diverse Student Populations (3)

This course provides an overview of best practices for instruction and intervention for students who are culturally and linguistically diverse and/or who have special education needs. The course addresses equitable practice, universal design for learning, response to intervention, and strategies for including second-language learners.

SPED 637: Inclusion for the Classroom Teacher (3)

This introductory course outlines fundamental concepts in special education, including response to intervention, universal design for learning, legal requirements, characteristics of students with disabilities, and supports for inclusion.

SPED 641: Curriculum & Methods of Instruction for Students with Disabilities K-12 (3) This course outlines instructional interventions within a multi-tiered system of supports, with emphasis on development of individualized education programs for students with disabilities.

SPED 644: Universal Design for Learning and Differentiated Instruction (3)

The purpose of this course is to introduce students to the Universal Design for Learning Framework and differentiated instructional practices. The course will focus on current research and practices pertaining to: (a) goals and indicators of students' performance prior to and throughout instructional units; (b) methods, specifically strategies for differentiating content, process, product and environment; (c) materials that are flexible and can be customized and adjusted for individual needs; and (d) assessment practices that accurately reflect and encourage student learning.



SPED 646: Using Technology to Differentiate Instruction (3)

This course presents applications of the Universal Design for Learning framework to current instructional practices, with emphasis on assistive and instructional technologies to support diverse student populations.

SPED 620: Educating the Student with ASD (3)

Overview of the characteristics, learning profile and strategies associated with supporting students with ASD and their families.

SPED 622: Social Thinking & Connectedness for Students on the Autism Spectrum (3)

Students will learn how to observe important social abilities. plan social objectives into lesson plans and facilitate important social skills using evidence-based practices.

SPED 625: Curriculum/Methods of Instruction for Students with ASD I (3)

Students will learn important strategies for inclusion and how to support the needs of students with higher level language and cognitive skills.

SPED 623: Behavior Management for Students with ASD (3)

Students will learn important strategies to positively support the behavior and teach selfmanagement strategies for students with ASD.

SOCI 543: Sociology of Race and Ethnicity (3)

Topics include race and ethnicity as social constructions, individual and collective racial and ethnic identities, racial and ethnic inequality, and resistance to oppression.

BIOL 651: ENVIRONMENTAL AND BIOLOGICAL SCIENCE IN INTEGRATED STEM EDUCATION (3)

Students investigate place-based education, environmental literacy, and outdoor applications of biology education, and consider how teachers teach and students learn about life science and environmental concepts in the context of integrated STEM (Science, Technology, Engineering and Mathematics) education in grades PK-12. Not for credit towards M.S. in Biology.

SCIE 650: ENGINEERING IN INTEGRATED STEM EDUCATION (3)

Students investigate the engineering design process, engineering habits of mind, and engineering fields, and consider how teachers teach and students learn about engineering and to engineer in the context of integrated STEM (Science, Technology, Engineering & Mathematics) education in grades PK-12.

SCIE 652: EARTH-SPACE & PHYSICAL SCIENCE IN INTEGRATED STEM EDUCATION (3)

Students explore physical and Earth-space science concepts, scientific practices, and ways in which teachers teach and students learn about these concepts and practices in the context of integrated STEM (Science, Technology, Engineering & Mathematics) education in grades PK-12.



MTED 650: MATHEMATICS IN INTEGRATED STEM EDUCATION (3)

Students investigate standards-based mathematical practices and concepts and consider how teachers teach and students learn about these practices and concepts in the context of thematic, integrated STEM (Science, Technology, Engineering & Mathematics) education in grades PK-12.

SCIE 685: PRACTICUM IN INTEGRATED STEM EDUCATION (3)

Practices and trends in organizing, teaching, and improving programs in PK-12 integrated STEM education.



BOARD OF REGENTS

SUMMARY OF ITEM FOR ACTION,
INFORMATION, OR DISCUSSION

TOPIC: University of Maryland University College Doctor of Business Administration

COMMITTEE: Education Policy and Student Life

DATE OF COMMITTEE MEETING: Tuesday, May 15, 2018

SUMMARY: The University of Maryland University College (UMUC) proposes to offer the Doctor of Business Administration (DBA) program. UMUC presently offers the Doctor of Management (DM) program and upon the approval of the DBA, the DM will be discontinued with no new students to be admitted and the current UMUC students in the DM will be permitted to complete the program or if they wish convert to the DBA.

The growth of professional doctorates, especially in the business field, demonstrates a specific orientation toward the applied, practice based degree Doctor of Business Administration (DBA). This proposed degree in business establishes for UMUC the final program to complete the vertical degree pathway beginning with the Bachelor’s in Business Administration, continuing to the Master’s in Business Administration, and culminating with the Doctor of Business Administration. The proposed program will more closely reflect market trends for careers associated with the profession. And, given the rise in the demand for the DBA over the past 15-20 years to respond to the needs of full-time working professionals and the industry’s emerging emphasis on data-driven decision making, the proposed DBA will prepare highly competitive graduates to practice evidence-based management and applied research that focuses on all strategic aspects of organizations and businesses.

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 Education Policy and Student Life Committee recommend that the Board of Regents approve the proposal from University of Maryland University College to offer the Doctor of Business Administration.

COMMITTEE RECOMMENDATION: _____ DATE: _____

BOARD ACTION: _____ DATE: _____

SUBMITTED BY: Joann A. Boughman 301-445-1992 jboughman@usmd.edu

UMUC

New Program Proposal
Doctor of Business Administration

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 University College

Institution Submitting Proposal

Doctor of Business Administration
Title of Proposed Program

Doctorate (Professional Practice)

Spring 2019

Degree to be Awarded

Projected Implementation Date

050671

11.1003

Proposed HEGIS Code

Proposed CIP Code

The Graduate School

K. Klose, PhD, Vice Provost and Dean

Department in which program will be located


Department Contact

(240) 684-2400

Kathryn.Klose@umuc.edu

Contact Phone Number

Contact E-Mail Address



 Signature of President or Designee

4/26/18

 Date

UMUC

New Program Proposal
Doctor of Business Administration

**University of Maryland University College
Doctor of Business of Administration**

Pursuant to COMAR 13.B.02.03.03, section D.4, University of Maryland University College (UMUC) proposes to offer a new instructional program at the doctoral degree level: Doctor of Business Administration (DBA) (proposed HEGIS 050671; proposed CIP 11.1003). UMUC currently offers a doctor of management (DM) (HEGIS 050100; CIP 520101) as well as an Area of Concentration (A.O.C.) in Community College Policy and Administration (CCPA) within the DM. Upon approval of the DBA, UMUC will continue to offer *only* the DM with A.O.C. in CCPA; UMUC students currently pursuing a standalone DM will be permitted to complete that program or convert to the DBA, but the standalone DM will be discontinued and no new students will be admitted other than to the DM with A.O.C. in CCPA.

With this change, UMUC's doctoral degrees will more closely reflect program design and market trends for careers associated with these two degrees. This proposal establishes a doctorate of professional practice, which is the final program in a complete vertical degree pathway within UMUC beginning with the bachelor's in Business Administration, continuing with the master's in Business Administration, and culminating with the proposed DBA degree. Retaining the A.O.C. in CCPA under the DM is the best fit for that program given that the needs and expectations of Community College management and administration remain closely aligned with the DM's emphasis on the development and mastery of managerial and administrative capacities. This content is signaled by the Doctor of Management degree, which is a more widely recognized credential in higher education administration and leadership than the DBA.

A. Centrality to Institutional Mission Statement and Planning Priorities

1. Program description and alignment with mission

Consistent with the institutional purpose as stipulated by State statute (Md. Education Code Ann. § 13-101(2013)),¹ the mission of UMUC is improving the lives of adult learners. UMUC will accomplish this by:

- (1) Operating as Maryland's open university, serving working adults, military servicemen and servicewomen and their families, and veterans who reside in Maryland, across the United States, and around the world;
- (2) Providing our students with affordable, open access to valued, quality higher education; and
- (3) Serving as a recognized leader in career-relevant education, embracing innovation and change aligned with our purpose and sharing our perspectives and expertise.

The growth of professional doctorates, especially in the business field, has been specifically oriented to the applied, practice-based doctoral degree of the DBA. The growth of the executive doctorate has occurred in the past 10-15 years (Banerjee and Morley, 2013; CGS 2007; Zusman 2013).² Zusman (2013) has noted the continued rise of the DBA over the past 15-20 years most recently with the development of the Executive DBA (EDBA), which responds to the needs of full-time working professionals and the industry's emerging emphasis on data-driven

¹ 2013 Maryland Code EDUCATION §13-101: <https://law.justia.com/codes/maryland/2013/article-ged/section-13-101/>

² Banerjee, S., & Morley, C. (2013). Professional doctorates in management: Toward a practice-based approach to doctoral education. *Academy of Management Learning and Education*, 12(2), 173-193.
Council of Graduate Schools (2007). *CGS task force report on the professional doctorate*. Washington, D.C.: Council of Graduate Schools.

Zusman, A. (2013). Degrees of change: How new kinds of professional doctorates are changing higher education institutions. *Center for Studies in Higher Education Research and Occasional Paper Series: CHSE.8.13*.
https://cshe.berkeley.edu/sites/default/files/publications/rops_cshe_8.13_zusman_degreesofchange.6.14.13_0.pdf

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decision making (Banerjee and Morley, 2013; CGS 2007; Zusman 2013). As an example, the Executive Doctorate of Business Administration Council (EDBAC) in seven years has grown from no professional doctoral programs in any organized association to over 50 executive doctorate programs, with most of these granting the DBA degree.³

The proposed DBA degree closely tracks the evolution of the field and industry. The proposed DBA responds to this evolution and will prepare highly competitive graduates by emphasizing the practice of evidence-based management and applied research and focusing on the more encompassing and strategic aspects of organizations and businesses. By design, UMUC's learning model emphasizes teaching and learning grounded in evidence and built on application-oriented experiences. This purposeful symmetry between industry best practices and UMUC's learning model, which is based on the principles of competency- and project-based learning, makes the proposed DBA the most appropriate and aligned program offering in this sector of UMUC's curriculum. The DBA curriculum will include projects oriented toward research-informed managerial decision-making, data analytics, consulting, and project work within organizational contexts that correspond with the field's and industry's move toward evidence-based and application-oriented approaches to executive leadership education. These areas of learning more effectively prepare students to succeed as managers and leaders in business.

2. Alignment with institutional strategic goals

As the public state and national leader in distance and distributed education, UMUC awards associate's, bachelor's, master's and doctoral degrees, as well as undergraduate and post-baccalaureate certificates. The university's academic inventory offers programs that are core to any public university, but UMUC's mission to serve adult students results in a sustained academic emphasis on career-relevant and workforce-aligned programs. Consequently, the university awards degrees and certificates in the arts and humanities, behavioral and social sciences, business and management, health-related fields, computing, education, and technology. As part of its emphasis on career-relevant education, UMUC offers non-credit professional development programs and hosts professional conferences and meetings supporting economic and societal needs of the State.

This proposal aligns with UMUC's mission by providing a learner-focused program based on leading-edge adult learning theory and curriculum design that addresses the needs of students, the community, and the economy. The proposed DBA program is consistent with UMUC's commitment to offering current and relevant degrees that prepare students for the workforce. Students are given time to practice skills as they progress through formative instruction and engage in authentic assessment of learning. The program will support students' professional development with project-based opportunities to learn by doing from employers and peers. The program model also offers flexibility and continuing education opportunities to adults interested in refreshing and reshaping their career opportunities.

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

1. Demand and need for the program

Evidence of program demand is derived from data models generated by Economic Modeling Specialists International (EMSI).⁴ A keyword search on skills or topics that these programs emphasize (e.g., economics, business development, strategic planning, risk management,

³ Executive DBA Council: <http://www.executivedba.org/>

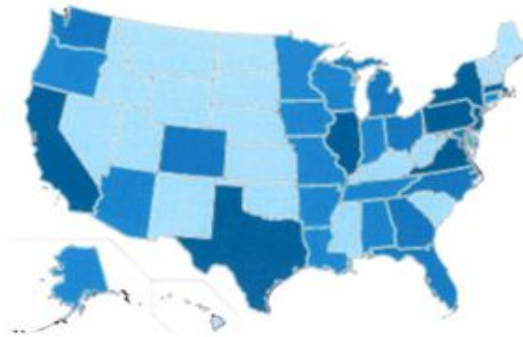
⁴ Economic Modeling Specialists International (EMSI): <http://www.economicmodeling.com/>

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business process) identifies 115,708 and 4,182 unique job postings in the nation and Maryland, respectively, from February 2017 to February 2018. Figure 1 below highlights the number of listings by state; the darker the color, the higher the demand. Though not among the top five states with the most DBA job postings, Maryland is among the higher-demand states nationally with a comparatively larger percent of postings for jobs related to the DBA degree.

Figure 1. Demand for Skills Emphasized by the Doctor of Business Administration Program



State	Unique Postings (Feb 2017 - Feb 2018)
California	15,846
New York	8,650
Massachusetts	6,657
Virginia	5,894
New Jersey	5,437

The five occupations that are most relevant to the topics and skills emphasized in the DBA program are:

1. Management Analysts
2. General and Operations Managers
3. Managers, All Other
4. Chief Executives
5. Social and Community Service Managers

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The projected growth over the next five years for DBA-related occupations is projected to be 5.8% for the nation and 3.0% for the Maryland Metropolitan Statistical Area (MSA) as shown in Table 1 below:

	2018 Jobs	2023 Jobs	%Change
Nation	157,146	166,251	5.8%
Maryland MSA	13,324	13,732	3.1%

The projected growth for the occupation category of Chief Executive, the most relevant occupation category to this proposed DBA, is 2% over the indicated five-year period (2018-2023) for the nation and Maryland, respectively. According to BLS and SOC definitions, "Chief Executive" is a broad category that spans a variety of occupations and disciplines, requires "very advanced communication and organizational skills", and includes "coordinating, training, supervising, or managing the activities of others to accomplish goals."⁵ Further, the category of "Chief Executive" defines leaders who "Determine and formulate policies and provide overall direction of companies or private and public sector organizations within guidelines set up by a board of directors or similar governing body. (They) plan, direct, or coordinate operational activities at the highest level of management with the help of subordinate executives and staff managers."⁵

The jobs in these occupations pay well above average. For example, the median and 75% earning per hour for Chief Executives in Maryland are \$92.38 and \$128.58, respectively. This is higher than the national average; the corresponding figures for Chief Executives across the country are \$73.09 and \$116.46.

In 2017, there were 38,646 unique job postings and 14,899 hired nationwide associated with the five occupations most closely aligned to the DBA credential. This means there was approximately 1 hire per 3 job postings for these five occupations. In the occupation category of Chief Executive alone, the number of posted jobs is 1,379, and the number of hires is 1,704 nationwide. This ratio is likely because openings for this level of occupation are typically hired through agencies or executive search firms, not through the more typical job application process common to most other positions. Excluding the results to only the Maryland MSA resulted in 284 unique job postings in 2017 and 88 hires, nearly 1 hire for every 3 posted positions.

⁵ <https://www.bls.gov/oes/current/oes111011.htm>

2. Consistency with the Maryland State Plan for Post-Secondary Education

The program proposal is designed to meet present and future needs of the state, as identified in *2017-2021 State Plan for Post-Secondary Education: Student Success with Less Debt (State Plan)*.⁶ This program supports the three primary goals in the *State Plan* in the following ways:

⁵ O*Net Online Summary Report for 11-1011.00 Chief Executives: <https://www.onetonline.org/link/summary/11-1011.00>

⁶ 2017-2021 Maryland State Plan for Postsecondary Education: <http://www.mhec.state.md.us/About/Pages/2017StatePlanforPostsecondaryEducation.aspx>

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- The program serves Goal 1 (Access) in the State Plan in that it is designed to support UMUC's overall mission to set a global standard for excellence and to be respected as a leader in affordable and accessible adult education programs. In addition, UMUC administers its programs to meet the University System of Maryland goals of effectiveness and efficiency by employing data-driven decision-making that ensures that academic programs are broadly accessible and offer high quality education at an affordable cost. At UMUC this commitment to affordability and access is synonymous with a commitment to diversity and inclusion. In 2016-2017, the existing Doctor of Management program awarded 22% of its degrees to military affiliated students, a subpopulation within the New College Majority population of students historically underserved by higher education.⁷ Additionally, as shown in Table 2 below, in 2016-2017, the existing DM program awarded 39% of degrees to African-American students and 3% of degrees to Hispanic students. UMUC is committed to maintaining its position in serving the educational needs of minority students, and the university's open-admission mission is central to this commitment. The admission requirements for the proposed DBA are aligned with this mission, including not requiring a minimum GPA and structuring the application process to give applicants the opportunity to explain how prior experience and learning have prepared them for this degree (see Table 6).

Table 2. Percentage of Doctoral Degrees Awarded to Selected Student Subpopulations, 2016- 2017⁸

% of Doctoral Degrees Awarded	Maryland Institutions in Total	UMUC Current Doctor of Management
Black/African American Students	10%	39%
Hispanic/Latino Students	4%	3%

- The program serves Goal 2 (Success) and Goal 3 (Innovation) in the *State Plan*, as it is based on principles of competency- and performance-based learning that are at the forefront of developments in adult learning in higher education. Competency-based learning is an outcomes-based approach to education that emphasizes what students should know and be able to do to be successful in their disciplines, fields, and careers. The approach is learner-focused, and authentic assessment (the measurement of what students have learned and the competencies students master) is embedded in every step of the learning process to assist students in building real-world, job-relevant competencies in real time. The proposed program employs authentic, project-based assessments that are relevant to tasks that graduates will actually perform on the job; such projects serve as both the means of instruction and assessment of learning in the program. Retention and success are focused on throughout students' learning experiences and improved through enhanced learning resources - readings, handouts, slides, etc. - which are all provided online within the learning management system. The methodology and the on-demand nature of the student support are innovative in the field of higher education and online learning, and reflect current best practices in adult

⁷Reynolds, C.V. (2013). Veterans face challenge of going from combat to campus. *Diverse Issues in Higher Education*.: <http://diverseeducation.com/article/52070/>

⁸ 2017 MHEC Data Book and UMUC's FY16 DIS.: <http://mhec.maryland.gov/publications/Documents/Research/AnnualPublications/2017DataBook.pdf>

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teaching and learning. There is also innovation in the subject matter: teaching and learning emphasizes evidence-based management practices to support executive level data-driven decision making.

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

1. Market Demand

Table 3 shows the employment outlook in Maryland and the DC Metro area for graduates of programs in occupations aligned with the DBA program. The projected 10-year demand shown in Table 3 is drawn from the EMSI employment projections for 2018-2027. Table 3 lists the top five occupations aligned to the DBA.

SOC Code	Occupational Category	Maryland MSA			The DC Metro Area*		
		2018	2027	10-Yr Change	2018	2027	10 Year Change
13-1111	Management Analyst	7,047	7,353	4.34%	4,881	5,024	2.93%
11-9199	Managers, All Other	2,608	2,670	2.38%	1,653	1,663	0.6%
11-1021	General and Operations Managers	2,020	2,141	5.99%	1,080	1,131	4.72%
11-1011	Chief Executive	1,109	1,134	2.25%	599	606	1.17%
11-9151	Social and Community Service Manager	540	592	9.63%	187	208	11.23%
Total		14,328	14,951	4.35%	8,399	8,632	2.77%

*Broken out from within the Maryland MSA

The data in the table demonstrate the potential for 623 (14,951 - 14,328) and 233 (8,632 - 8,399) new positions over the next decade in Maryland and the DC Metro area, respectively, in the five most relevant occupations for which the proposed program will prepare graduates. While the data presented here reflect the market demand within regional proximity of UMUC's headquarters, the institution's online model and global reach will, in actuality, draw students from and prepare graduates for employment across the nation and beyond.

Additional relevant career roles or titles for students graduating from the DBA program include, among others:

- Program Managers
- Directors
- Business or Research Analysts
- Managing Consultants

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2. Educational and training needs

Jobs in the broad category "Chief Executive" are classified by the U.S. Department of Labor as requiring extensive preparation and work-related skills and knowledge, most of which require at least a four-year bachelor's degree and a great deal of work experience. Many top executives have master's degrees in business administration. Chief executives work in all industries for both large and small businesses. They devise strategies and policies to ensure the organization meets goals, and the DBA is increasingly seen as a pathway for enhancing leadership skills and diversifying executive-level leadership opportunities for experienced leaders.⁹

3. Prospective graduates

The following enrollment projections are based upon expected time-to-completion of the program in three years, with students enrolling in an average of 18 semester hours per year. The year one number includes students who are currently enrolled in the DM who may elect to switch to the DBA. The data for years two through five is estimated based on historical enrollment trends in the doctoral program.

Table 4: Projected Enrollment in Program Years One through Five

Projected Enrollment	Year One	Year Two	Year Three	Year Four	Year Five
First Year Students	55	60	60	65	65
Second Year Students		52	58	58	63
Third Year Students			50	56	56
Total Students	55	112	168	179	184

It is anticipated that approximately 55-60 degrees will be awarded each year after the program is established and reaches steady state.

D. Reasonableness of Program Duplication

1. Similar programs in the state

The proposed DBA program at UMUC will be degree type 85 (Doctorate professional practice). A search of the MHEC program inventory¹⁰ revealed one DBA degree program in Maryland. The program, at Hood College, launched in Fall 2016, so there is no data available on number of degrees awarded. Along with Hood's Doctorate of Organizational Leadership (DOL), a degree Hood also launched in 2016, there are three programs that have minor components that overlap with the program being proposed as shown in Table 5 below. All of the similar doctoral degree programs in Maryland are degree type 81 (Doctorate research/scholarship):

⁹ Bureau of Labor Statistics, U.S. Department of Labor. *Occupational Outlook Handbook, 2017-18 Edition*

¹⁰ MHEC program inventory: <http://data.mhec.state.md.us/macAux.asp#api>

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Table 5: Number of Degrees Awarded, By Year, in Similar Doctoral Degree Programs in Maryland									
CIP Code	HEGIS	Institution	Credential	Program Title	Year				
					2012	2013	2014	2015	2016
520213	050601	Hood College	Doctorate of Business Administration (DBA) Degree Type: Doctorate research/scholarship	Doctorate of Business Administration	N/A	N/A	N/A	N/A	N/A
520213	050602	Hood College	Doctorate of Organizational Leadership (DOL) Degree Type: Doctorate research/scholarship	Doctorate of Organizational Leadership	N/A	N/A	N/A	N/A	N/A
520201	050601	Morgan State University	Doctor of Philosophy (PhD) Degree Type: Doctorate research/scholarship	PhD Program in Business	2	1	5	6	1
520101	050100	University of Maryland, College Park	Doctor of Philosophy (PhD) Degree Type: Doctorate research/scholarship	PhD Program in Business	19	26	14	16	12
309999	490050	University of Maryland, Eastern Shore	Doctor of Philosophy (PhD) Degree Type: Doctorate research/scholarship	Organizational Leadership Doctoral Program	24	7	13	15	8
Total					45	34	32	37	21
Cumulative Total over Five Years									169

The columns on the right of Table 5 show the annual number of degrees awarded by these programs in Maryland. These data demonstrate that these programs yielded a total of 169 Doctoral degrees in the years 2012-2016. This level of degree production is insufficient to meet the employment projections presented in Table 3 for occupations that are aligned with the Doctorate of Business Administration program being proposed. The demand for upper-level management and leadership jobs required across public, private and non-profit sectors in Maryland and the greater Washington, D.C. area continues to increase much faster than the number of doctorally-qualified practitioners.

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 Doctor of Business Administration

2. Program justification/Reasonableness of Program Duplication

Table 6 contrasts UMUC's proposed DBA with Hood College's DBA.

Table 6: Comparison of UMUC Doctorate of Business Administration with Hood College Doctorate of Business Administration		
	UMUC DBA	Hood College DBA
Degree Requirements and Structure (number of credits, a single required sequence vs. electives)	51 credits beyond the master's degree: 3 credits of prerequisite, 36 credits of a single required sequence, and 12 credits of dissertation research and writing. Degree conferral requires successful completion of a doctoral dissertation.	60 credits beyond the master's degree: 27 credits of core, 12 credits of specialization, 9 credits of research methodology, and a 12 credit capstone research project (in lieu of dissertation). Degree conferral also requires six approved management workshops, one conference presentation, one "experiential opportunity" with a faculty member, and one paper publication.
Delivery (onsite vs. online)	Hybrid: Online, asynchronous, with one mandatory, two-day face-to-face residency per term in Shady Grove, Maryland (Friday-Saturday).	Fully onsite in Frederick, Maryland.
Enrollment (full-time vs. part-time)	Most students are part-time (6 credits per term). New cohorts are admitted each fall, winter, and spring.	Most students are part-time. New cohorts are admitted each fall.
Admissions Requirements/Target Audience	UMUC is an open-admission institution that does not require a minimum GPA for admission. Students must possess a Master's degree from an accredited institution. Students must submit a resume; two letters of recommendation; and, a personal statement. Targeted toward working professionals with prior experience in the field.	Students must possess a Master's degree with a minimum 3.25 overall GPA. Students must submit a resume demonstrating a minimum 8 - 10 years of progressive professional experience; two letters of recommendation; and two essays. Students must submit scores from GRE, GMA, SLLA or MAT or a master's capstone project. Some applicants may be asked to interview. Targeted to mid-career professionals who hold leadership positions within their organizations or have a

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		strong desire to ascend to that level.
<p>Primary Points of Differentiation in Requirements and Target Audience: The UMUC program is mostly asynchronous and online, compared to Hood's fully onsite program. UMUC's approach provides maximal flexibility for working professionals. The UMUC program offers a single curriculum in which all students take the same classes. This facilitates retention and successful program completion. The UMUC program culminates in a doctoral dissertation, which students traditionally name as the highlight of their program experience. UMUC's program does not impose extra-curricular requirements or limit access based on work experience.</p>		
CIP Code	<p>520101 Title: Business/Commerce, General Definition: A program that focuses on the general study of business, including the processes of interchanging goods and services (buying, selling and producing), business organization, and accounting as used in profit-making and nonprofit public and private institutions and agencies. The programs may prepare individuals to apply business principles and techniques in various occupational settings.</p>	<p>520213 Title: Organizational Leadership Definition: A program that focuses on leadership skills that can be applied to a business, government, non-profit, or educational setting. Includes instruction in organizational planning, dynamics of leadership, finance, team building, conflict resolution and mediation, communication and other management skills.</p>
<p>Primary Points of Differentiation in CIP: The UMUC CIP 520101 concerns a broader focus on all facets of business as a profession, including executive leadership and management. The Hood CIP 520213 is more specifically focused on leadership.</p>		
Pedagogy and Learning Model	<p>The program pedagogy model is a hybrid format and fully cohort-based. The cohort remains together through a required course order. There is a mandatory, 16-hour face-to-face residency each term for all students.</p> <p>The curriculum is based on principles of competency- and performance-based learning and authentic assessments are embedded throughout; students "learn by doing" through scenario-based projects grounded in</p>	<p>The program pedagogy comprises a face-to-face cohort-based model of traditionally structured coursework. The cohort is together through 27 credits of core courses, 9 credits of research courses and 3 capstone courses (but not the 12 credits of specialization). All courses are taught on site.</p>

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	<p>real-world situations and problems and using interactive tools and case studies which incorporate applied learning.</p> <p>Foundational to the program is a first course that covers the core competencies of written and oral communications, critical thinking, quantitative reasoning and leadership. There are six additional 6-credit courses for domain-specific competency and skills and 12 credits of dissertation research and writing.</p>	
Program Content	<p>The UMUC DBA is grounded in real-world, authentic projects that provide a solid foundation in competencies and skills related to: understanding how to apply a theoretical lens to better understand organizational operations; review, evaluate, and perform management research for decision making; apply tools of business research to advise an organization in decision making; effectively communicate management research findings to practitioners; apply evidence-based solutions to an organization, and assess their effectiveness; use data mining, forecasting, and predictive models to inform and enable evidence-based decision making; and prepare advice for an organization seeking management solutions to a specific problem.</p>	<p>The Hood DBA is centered on a 27 credit core including traditional seminars on leadership theory, leadership ethics, managing human capital, financial stewardship for leaders, sustainable leadership, leading strategic change, communication, and policy. Beyond the core are 9 credits of research methodology and 12 specialization credits that may be in the departments of Psychology and Counseling, Economics, Education, or Business Administration.</p>
<p>Primary Points of Differentiation in Pedagogy/Learning Model and Content: UMUC's program uses a learning model based on the principles of competency- and project-based learning. It focuses on elevating what learners can DO in the professional environment, thus producing tangible value for graduates. The Hood program uses a traditional learning model based on reading and manuscript writing.</p>		

UMUC

New Program Proposal
Doctor of Business Administration**E. Relevance to high-demand programs at Historically Black Institutions (HBIs)**

A search of the MHEC inventory of approved academic programs in Maryland found no Doctorate of Business Administration programs at HBIs that would be considered duplicative with this UMUC proposal. This includes the four Historically Black Institutions in Maryland (Bowie State University, Coppin State University, University of Maryland Eastern Shore, and Morgan State University).

However, Morgan State University has a PhD program in Business Administration, and the University of Maryland Eastern Shore has a PhD program in Organizational Leadership. Although both the DBA and the PhD are doctoral degrees, the content and purpose of the degrees differ quite significantly. A PhD degree is a degree based in and emphasizing theory and oriented around original research that primarily prepares its students for academic careers as academics producing scholarship at research universities. Morgan State's website clearly emphasizes this type of research focus and academic orientation of its program, noting that it specifically prepares students for academic careers:

The curriculum is designed to provide graduates with in-depth exposure to a specific business content area, sophisticated analytical methods, and adult education techniques. This last feature is unique to the program and is structured around a four-course sequence covering different aspects of university-level teaching.¹¹

Similarly, UMES specifically names an academic career first in its list of possible occupations for graduates, noting that "[g]raduates of the program see success in roles in academia, executive consultancy, leadership and organizational development, and research."¹²

Conversely, professional doctorates like the proposed UMUC DBA are applied degrees designed to prepare students for high-level, professional careers in business and management. The proposed DBA at UMUC is designed for executive-level working professionals. As Skinner (2014) has explained in *CEO Magazine*:

"Both the DBA and the PhD are terminal degrees in business, and are both focused on developing an individual's research capabilities. The PhD aims to create academic researchers for a career in top business schools, the degree is within a specific discipline, and the focus is on developing new theory through rigorous research. In contrast, the DBA aims to develop practitioner researchers for a career in industry, the degree is interdisciplinary (hence the name) and the focus is on solving practical problems through rigorous [scholarship]."¹³

Thus, both the process and outcome of the DBA degree diverge significantly from a PhD degree.

F. Relevance to identity of HBIs

Even though UMUC's degree and those at Morgan and UMES are at the doctoral level, they serve student audiences with vastly different career goals and they offer distinctive curricular content and learning models that target and attract distinct student populations. Thus, UMUC's proposed program will have no impact on the uniqueness and institutional identities and missions of the HBIs and will not harm these schools or other institutions in Maryland.

¹¹ Morgan State University PhD Program in Business Administration: <https://go0.gl/UJtvAB>

¹² UMES Organizational Leadership Doctoral Program: <https://www.umes.edu/ORLD>

¹³ Skinner, A. (2014, July). Debunking the Doctor of Business Administration. *CEO Magazine*, 15, 38 – 40.

UMUC

New Program Proposal
Doctor of Business Administration**G. Adequacy of Curriculum, Design and Deliver****1. Course List with Title, Semester Credit Hours and Course Descriptions, including Program Requirements*****Required Pre-Admission Course*****DBA 600 Foundations of Doctoral Study (3 cr.)**

Prepare for doctoral studies by developing foundational skills in evidence-based research and analytical writing. Engage in critical thinking, in-depth analysis, evaluation of published scholarship, and research synthesis. Assess personal readiness for doctoral study.

Required Program Courses**DBA 800 Interpreting and Translating Management Theory in Practice (6 cr.)**

Prerequisite: DBA 600. Evaluate management theories to explain organizational operations in relation to forces that act at the level of the individual, group, and society. Connect these explanations within practitioner systems, and analyze and associate management theories with practical management strategies.

DBA 810 Research as a Tool for Management Decision Making (6 cr.)

Prerequisite: DBA 800. Develop the capability to review, evaluate, and perform management research for decision making, and critically interpret both qualitative and quantitative research methodologies. Apply tools of business research to advise an organization in decision making. Refine skills to effectively communicate management research findings to practitioners.

DBA 820 Evidence-Based Research Methods (6 cr.)

Prerequisite: DBA 810. Acquire and appraise evidence using sophisticated bibliographic search strategies to inform management decision making. Defend qualitative data analysis research choices. Apply evidence-based solutions to an organization, and assess their effectiveness. Develop a plan to use assessments to iteratively improve solutions.

DBA 830 Data Analytics in Practice (6 cr.)

Prerequisite: DBA 820. Review and refine quantitative skills essential for analytical leadership. Explore methods of data mining, forecasting, and predictive models to inform and enable evidence-based decision making, and investigate the data environment in an organization. Assess an enterprise's current capabilities to develop recommendations for a stronger business intelligence climate.

DBA 840 Designing Evidence-Based Management Solutions (6 cr.)

Prerequisite: DBA 830. Prepare advice for an organization seeking management solutions to a specific problem. Analyze and evaluate organizational context, select appropriate management tools, and develop solutions. Employ project management methods, and collaborate effectively with the team face-to-face and online. Produce written and oral presentations of results and recommendations to organizational stakeholders.

DBA 850 Producing Original Management Ideas That Influence: Publishing and Conferencing (6 cr.)

Prerequisite: DBA 840. Identify a management problem, create an evidence-based research approach to solve the problem, and execute it. Present results at a scholarly or practice conference, and submit written results in the form of a professional quality article to a scholarly or practice journal.

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 Doctor of Business Administration

DBA 860 Producing Actionable Knowledge: Dissertation Problem Statement and Literature Review (4 cr.)

Prerequisite: DBA 850. Construct a framework for investigating a relevant management problem. Identify the scope of the problem, construct a suitable research question, and examine the scholarly literature that provides a credible and insightful explanation of the primary concepts and relationships surrounding the problem. Produce the dissertation problem statement and literature review chapter.

DBA 870 Producing Actionable Knowledge: Dissertation Methodology and Analysis (4 cr.)

Prerequisite: DBA 860. Design an evidence-based research approach to investigate the dissertation management problem. Collect relevant data to answer the research question, and analyze and interpret the data to consider how they inform the research question. Produce the dissertation methods and results chapters.

DBA 880 Producing Actionable Knowledge: Management Implications from Dissertation Research (4 cr.)

Prerequisite: DBA 870. Complete the dissertation process. Formulate and explain the implications and value of the research findings for management practice, and make specific recommendations to improve management practice. Present and defend the dissertation research successfully, and publish it.

2. Education Objectives and Learning Outcomes

Designed for executive-level working professionals, the DBA emphasizes management theory and strategic thinking, organizational leadership and change, research and innovation, and sustainability in the global business environment. Through applied research and analysis of real-world management issues, DBA students gain sophisticated knowledge for the executive level of management. The DBA cohort structure promotes close, interactive partnerships among students, faculty, and staff and a supportive network for lifelong learning. Given the hybrid structure of the program - online, asynchronous, with residencies - students benefit from exposure to national and global perspectives and experiences with geographically diverse classmates and faculty. The DBA provides students the research and management competencies necessary to acquire, appraise, analyze, apply, and assess information for complex evidence-based decision-making.

Through coursework, DBA students will be able to:

- Conduct and evaluate management research for decision making
- Investigate the overall business intelligence environment in an organization
- Develop ethical solutions to complex organizational problems
- Initiate and lead successful change
- Perform management research and effectively communicate findings to practitioners
- Assess management environments and develop problem concept models
- Design and implement evidence-based solutions aligned with organizational need
- Assess an enterprise's analytic capabilities to develop recommendations for a stronger business intelligence climate
- Present innovative ideas at professional conferences and submit for publication

3. General education requirements

None applicable

UMUC

New Program Proposal
Doctor of Business Administration**4. Specialized accreditation or graduate certification requirements**

None applicable

5. Contractual agreement with other institutions

None applicable

H. Adequacy of Articulation

Not applicable

I. Adequacy of Faculty Resources

UMUC's model employs full-time faculty (known as collegiate faculty) in faculty leadership roles, such as Vice Deans and Program Chairs, with responsibility for the overall intellectual coherence and integrity of the program. Other collegiate faculty teach and serve in complementary roles that maintain and support the academic programs, providing input into the design and content of the program and their courses. This core group of full-time collegiate faculty will comprise about 10 percent of the total faculty who will teach in the DBA program.

In keeping with UMUC's emphasis on workplace relevance, the DBA teaching faculty will be practicing professionals who all have a terminal degree in their field and teach part-time for UMUC. These adjunct faculty provide instruction for the majority of courses (which is true for all programs at all levels at UMUC). This model is responsible for one of UMUC's greatest strengths: scholar-practitioner faculty who have solid academic credentials and continue to work outside the university, providing a continuous infusion of current workplace knowledge, career relevant perspectives, and maximum flexibility for adapting to changing student demand. In this way, UMUC supports students in a learning experience that is practical and relevant to today's competitive and evolving global marketplace. Many adjuncts have considerable experience with UMUC. As of 2018, the average longevity for an adjunct faculty member is 6.6 years and 24 percent of current adjunct faculty have been with UMUC more than 10 years. Collegiate and adjunct faculty both hold academic rank and title, based on their academic qualifications and professional experience, including teaching experience at UMUC. Since 1996 UMUC has held a MHEC-approved waiver of the Code of Maryland (COMAR) requirements for total credit hours taught by full-time faculty (Appendix A).

The centrality and appropriateness of UMUC's faculty model relative to its educational mandate and mission are reaffirmed by MHEC in the most recent review of mission statements, as evidenced in the following excerpt from the Commission's report:

UMUC intentionally seeks highly-qualified full-time and adjunct faculty who have hands-on experience in the disciplines they teach and who can leverage that experience to provide a richer learning experience for students. The university's mission to serve adult students is supported by adjunct faculty who are scholar-practitioners engaged daily in their profession. The ability to employ adjunct faculty is critical to UMUC's capacity to quickly deploy academic and continuing education programs in response to workforce-related needs. This entrepreneurship and flexibility in establishing new programs is particularly important to the university: given its history of very limited state support, the university's financial model is based on tuition revenues, and all programs must be self-supporting.¹⁴

¹⁴ Maryland Higher Education Commission (December 2015), Mission Statement Review:
http://mhec.maryland.gov/institutions_training/Documents/acadaff/2016MissionStatementReview.pdf

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Consistent with this model, UMUC has a substantial roster of faculty with expertise in areas related to business administration and management. A terminal degree is generally required to teach at the graduate level, although exceptions are made in the case of an individual with a master's degree and exceptional professional credentials, experience, and expertise. Teaching effectiveness is monitored by class observation, student course evaluations, and program-specific, student-level competency assessment. The Graduate School already has an active unit of faculty qualified and prepared to teach courses in the proposed program.

Table 9 provides a representative list of faculty with their highest degree title, academic title/rank, and the courses they will teach:

Name	Appointment Type and Rank	Terminal Degree and Field	Status	Course(s) to be Taught
Denise Breckon	Collegiate Professor	Doctor of Management (UMUC)	Full-Time	DBA 800, DBA 840, DBA 850, DBA 860, DBA 870, DBA 880
Leslie Dinauer	Program Chair, Collegiate Professor	PhD Communication (University of Maryland)	Full-Time	DBA 600, DBA 810, DBA 820
Kriesta Watson	Collegiate Professor	EdD (Morgan State University)	Full-Time	DBA 810, 820, 830, 860, 870, 880
Candis Best	Adjunct Professor	JD (Villanova), PhD Social Welfare Research & Policy Development (Stony Brook University)	Part-Time	DBA 860, DBA 870, DBA 880
Schuyler Jarrow	Adjunct Associate Professor	PhD Industrial & Organizational Psychology (Alliant International)	Part-Time	DBA 600, DBA 820
Rick Milter	Adjunct Professor	PhD Public Administration (SUNY Albany)	Part-Time	DBA 800, DBA 840
Lisa Pearo	Adjunct Professor	DBA (Harvard)	Part-Time	DBA 810
John Sherlock	Adjunct Professor	EdD in Human Resource Management (George Washington)	Part-Time	DBA 820, DBA 860, DBA 870, DBA 880
Alex Vernon	Adjunct Professor	DBA in Quantitative Analysis (Louisiana Tech University)	Part-Time	DBA 810, DBA 830
Laura Witz	Adjunct Professor	PhD in Communication (Michigan State)	Part-Time	DBA 810, DBA 830

UMUC

New Program Proposal
Doctor of Business Administration**J. Adequacy of Library Resources**

No new library resources are needed to serve the proposed program. The UMUC Library provides access to a vast array of library resources and services to UMUC students, faculty, and staff worldwide to meet their academic needs and includes a wide and varied collection of journal articles, reports, case studies, and, in some instances, complete books available electronically via a comprehensive selection of online library databases. Library services include instruction, reference, electronic reserves, and document delivery for materials not otherwise available in the library databases. The UMUC Library relies on distributed technology as its primary mechanism to provide online access to resources and services to UMUC's widely dispersed, working-adult student population.

The curated collection of online academic research databases available to UMUC faculty and students provides access to hundreds of thousands of full-text articles as well as reports, statistics, case studies, book chapters, and complete books in a wide range of subject areas. In addition, students have access to the full text of dissertations and theses via the *ProQuest Dissertations and Theses* database. The Library assists faculty and learning designers in providing links to Library materials directly in online classes.

The UMUC Library also offers other resources and services. UMUC students, faculty, and staff within the continental United States have access to more than ten million volumes in print from the 16-member University System of Maryland and Affiliated Institutions (USMAI) library consortium. The UMUC Library offers document delivery services to all UMUC students, faculty, and staff worldwide for a variety of materials, including journal articles and book chapters. UMUC's expanding collection of 75,000 electronic books (e-books) has significantly increased the ability to meet the needs of UMUC's global population.

The UMUC Library provides faculty and students with research assistance in creating search strategies, selecting relevant databases, and evaluating and citing sources in a variety of formats via its *Ask a Librarian* service at <https://www.umuc.edu/library/libask/index.cfm>, which includes 24/7 chat and email. A guide to locating scholarly articles and using UMUC's library databases is available at <http://www.umuc.edu/library/libhow/articles.cfm>. The UMUC Library *OneSearch* tool allows users to simultaneously search for scholarly articles, books, and/or other research resources via a single search engine in most of the databases to which the UMUC Library subscribes, either directly or as additional resources.¹⁵ In addition, UMUC faculty can request customized library instruction sessions for both on-site and online classes, and can also add UMUC Library tutorials and materials to their learning management system classrooms and refer students to them through the Web gateway.

A librarian liaison assigned to each academic department assists faculty with resource identification and other program needs. The Subject Guides area of the library's Web site at <http://www.umuc.edu/library/libresources/subjects.cfm> provides a listing of resource guides for each subject area, with each guide containing relevant databases, Web sites, books, and other resources along with technical and citation assistance.

K. Adequacy of Facilities, Infrastructure, and Equipment

Existing resources related to facilities, infrastructure, and equipment are adequate to meet the program needs. This program draws on existing faculty who are currently equipped with the necessary facilities, resources, and equipment. The proposed DBA will continue to include a face-to-face component in which students participate in a two-day on-site residency at the midpoint of each 11-week term. There are three terms per year so a minimum of three years in the DBA program results in a total of 9 days of residencies. The residency component of the program does require the use of facilities; the DBA will host residency activities at the Universities of Shady Grove.

¹⁵ UMUC Library: <http://sites.umuc.edu/library/index.cfm>

UMUC

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No new general funds are required for implementation of this program. The financial table that follows is based only on students entering the new program and does not include revenue and expenses related to the teach-out of students in the existing standalone DM program.

As shown in Table 10 below, the program is expected to be self-supporting from inception. If necessary, resources will be reallocated from the existing program to support the new program in year one. Regarding expenditures, because the standalone DM program will be discontinued in parallel with the launch of the DBA, UMUC's existing base of FTE faculty and administrative and support staff will be redirected to support and serve the DBA program.

TABLE 10: 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)	\$1,076,130	\$1,173,960	\$1,173,960	\$1,271,790	\$1,271,790
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	45	60	60	65	65
e. Credit Hour Rate	\$1,087	\$1,087	\$1,087	\$1,087	\$1,087
f. Annual Credit Hour Rate	18	18	18	18	18
g. Total P/T Revenue (d x e x f)	\$880,470.00	\$1,173,960.00	\$1,173,960.00	\$1,271,790.00	\$1,271,790.00
3. Grants, Contracts & Other External Sources	0	0	0	0	0
4. Other Sources	0	0	0	0	0
TOTAL (Add 1 – 4)	\$880,470.00	\$1,173,960.00	\$1,173,960.00	\$1,271,790.00	\$1,271,790.00

M. Adequacy of provisions for evaluation of program

As discussed above under "Evaluation and Assessment," all UMUC programs are subject to comprehensive and multi-pronged evaluations. These include course and faculty assessment, program-specific, student-level competency assessment, institution-wide student learning outcomes, and program outcomes among others. Faculty, administrators, and the Office of Accreditation, Compliance and Reporting in the Office of the Chief Academic Officer collaborate to implement and

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monitor assessment activities, review results, and make appropriate resource, curriculum, or other modifications.

N. Consistency with the State's minority student achievement goals

UMUC seeks to reflect the diversity of the global community within which it exists. Cultural differences are recognized, valued, and considered essential to the educational process. UMUC provides an academic environment in which diversity is not only articulated as one of the institutional core values, but it is reflected in the University's ethnically and racially diverse student body and its proven record of providing higher education access to minority students.

- As of Fall 2017, 48% of all undergraduate students and 56% of all graduate students are minority students.¹⁶
- Additionally, as of Fall 2017, UMUC enrolls more African American students (17,417) than any other state institution in Maryland, including any single one of the four Maryland HBIs. Morgan State University is second with 5,864 African American students.¹⁷
- In Fiscal Year 2016, 44% of bachelor's degrees, 52% of master's degrees, and 39% of doctoral degrees were awarded to minority students¹⁸
- In Fiscal Year 2016, UMUC awarded more degrees to African American students than any of the four Maryland HBIs in Maryland and UMCP.¹⁹

O. Relationship to low productivity programs identified by the Commission

Not applicable.

¹⁶ Institution Data Dashboard for University System of Maryland (IRIS): <https://www.usmd.edu/IRIS/>

¹⁷ IRIS: <https://www.usmd.edu/IRIS/> and Morgan State University Institutional Research Fact Book: <https://goo.gl/BrV7gd>

¹⁸ Integrated Postsecondary Education Data System (IPEDS): <https://nces.ed.gov/ipeds/datacenter/InstitutionProfile.aspx>

¹⁹ IPEDS: <https://nces.ed.gov/ipeds/datacenter/InstitutionProfile.aspx>

UMUC

New Program Proposal
Doctor of Business Administration

Appendix A: Verification of UMUC waiver of Full-time Faculty and Library/Learning Resources Center



90.2.1.001
cc: L&L
Bob J

Robert L. Ehrlich, Jr.
Governor
Michael S. Steele
Lt. Governor
John J. Oliver, Jr.
Chairman
Cedric W. Burnett
Secretary of Higher Education

MEMORANDUM

DATE: January 6, 2005
TO: Dr. Nicholas H. Allen
Provost and Chief Academic Officer, UMUC
FROM: Michael J. Kiphart, Ph.D. *MJK*
Assistant Secretary for Planning and Academic Affairs
SUBJECT: UMUC Waiver of Full-Time Faculty and Library/Learning Resources Center

Office of the Provost
UMUC
JAN 10 2005

According to our records, UMUC's request for a waiver of full-time faculty and library/learning resource center went before the Education Policy Committee on January 16, 1996. The Education Policy Committee approved for the University a waiver of the definition of full-time faculty and library/learning resource center as provided for in the Commission's *Minimum Requirements for Degree-Granting Institutions*, and further, that the Commission instruct the Secretary of Higher Education to review the University at regular intervals to assure that the University was in compliance with the applicable provisions of the waiver to the minimum requirements.

On February 15, 1996, the matter went before the Commission and an amended recommendation was approved. The Commission approved for the University a waiver of the requirements for total credit hours taught by full-time faculty and for a waiver of the requirements for a minimum library collection for the Library/Learning Resource Center as provided for in the Commission's *Minimum Requirements for Degree-Granting Institutions*. Further, the Commission instructed the Secretary of Higher Education to review the University at regular intervals to assure that the University was in compliance with the applicable provisions of the waiver to the minimum requirements. The Commission also approved a recommendation that the Faculty Advisory Council and Student Advisory Council recommendations be referred to the University of Maryland System Board of Regents.

Enclosed are documents supporting the approval of the waiver. Should you require additional assistance, please contact David Sumler, Director of Academic Affairs - Planning and Policy, at 410-260-4513 or dsumler@mhcc.state.md.us.

MJK :aw
Enclosures

MARYLAND HIGHER EDUCATION COMMISSION
839 Bengtson Rd. • Suite 400 • Annapolis, MD 21401-3912
T 410 260-4500 • 800 974-0303 • F 410 260-3200 • TV for the Deaf 800 730 2258 • www.mhcc.state.md.us

UMUC

New Program Proposal
Doctor of Business Administration

cc: *2 files*

*Forwarded through
to appropriate
action
via
Comm. on Ed
Policy*

April 23, 1996

Mr. Lance W. Billingsley, Esq.
Chairman, Board of Regents
University of Maryland System
3300 Metzger Road
Adelphi, MD 20783

RECEIVED
APR 30 1996
By: VCAA

Patricia S. Florestano
Governor

Edward O. Clarke, Jr.
Deputy

Patricia S. Florestano
Secretary of
Higher Education

RECEIVED
APR 29 1996
OFFICE OF THE CHANCELLOR
THE UNIVERSITY OF MARYLAND
SYSTEM

Dear Mr. Billingsley:

At its February 15, 1996 meeting, the Maryland Higher Education Commission considered a request by University of Maryland University College for a waiver of the Commission's minimum requirements in the area of full-time faculty and library resources. The Commission has granted the waiver.

In the discussion of the waiver and related issues, both the Faculty Advisory Council and the Student Advisory Council to the Commission raised issues which the Commission felt were more appropriately addressed by the University of Maryland's governing board. Therefore, I am forwarding to you the resolutions submitted to the Commission by these two advisory councils, in addition to the relevant materials considered by the Commission in granting the waivers.

Consistent with the final recommendations of the Commission on this matter, I would appreciate a review of these issues by the Board of Regents. I would also appreciate receiving the results of that review when it is completed. Since the academic year is coming to a close, I realize that any reaction on the part of the Board of Regents may be delayed until next fall. In light of that schedule, could you please supply the Commission with the Board of Regents' position by November 1, 1996.

Sincerely,
Edward O. Clarke, Jr.
Edward O. Clarke, Jr.
Chairman

EOC:PSP-JAS:ds

Enclosures

cc: Dr. Patricia S. Florestano
 Dr. Donald N. Langenberg

16 Francis St., Annapolis, MD 21401-1781 | (410) 974-2971 | FAX (410) 974-3513
TTY for the Deaf: (800) 735-2258





BOARD OF REGENTS

SUMMARY OF ITEM FOR ACTION,
INFORMATION, OR DISCUSSION

TOPIC: Report of the Regents' Workgroup on Civic Education and Civic Engagement

COMMITTEE: Education Policy and Student Life

DATE OF COMMITTEE MEETING: Tuesday, May 15, 2018

SUMMARY: Last year, at the May EPSL Committee meeting (5/19/17), Chairman Thomas Slater charged a Regents' Workgroup on Civic Education and Civic Engagement to:

make recommendations for system-wide initiatives to help our students graduate as more active and effective citizens. The group's three-part mission should focus on civic education, civic engagement, and civic responsibility.

USM convened the workgroup that included regents, provosts, vice presidents for student affairs, and students. In addition, the workgroup reached out to knowledgeable experts from both within and external to USM institutions. The workgroup did an environmental scan that included:

1. Survey of national reports, including AACU's national report, *A Crucible Moment (2016)*, and reports from other national associations engaged in inquiry in to civic education in higher ed.
2. Other state System, including Massachusetts which was the first State Board of Higher Education to adopt statewide policies for civic learning and engagement; and
3. A System-wide survey of all 12 institutions to identify existing, ongoing, and aspirational activities and campus-level investments and initiatives.

The draft report was shared during two comment periods: first with the Provosts and Vice Presidents for Student Affairs, and USM Student Council that resulted in a revised report. The revised report was then shared in a second comment period through the Council of University System Presidents (CUSP) and Chancellor's Council. The attached report reflects the revisions and includes recommendations from the Regents' Workgroup.

Recommendations for USM:

1. Foster an ethos of civic engagement and participation across all parts of all institutions and throughout the educational culture.

- Encourage Carnegie Community Engagement classification for all institutions in USM.
- Consider offering incentives through partnership grants for institutions to help each other (those that have earned classification can help institutions that are on the path).
- Encourage voting by using the National Study of Learning, Voting and Engagement (NSLVE) data to document and assess progress toward higher voter participation from each institution. Share reports with USM office.
- Consider the development of a "badge" to designate student-level competencies in civic learning and democratic engagement.

2. Identify civic literacy as a core expectation for all students.

- Expand opportunities for service/action learning for undergraduate students in all majors to engage in real-world applications of their learning through coursework and through community leadership programs.

- Expand opportunities for civic learning and engagement for graduate students as it applies to their programs of study.
- Align civic learning and democratic engagement goals with Carnegie Community Engagement standards, and have institutions report progress toward agreed upon goals.
- Establish the Civic Learning and Democratic Engagement Workgroup as an ongoing USM workgroup with responsibility for defining goals (in collaboration with institutions), developing and analyzing a System-wide survey, and overseeing the progress toward goals.
- Consider establishing a Regents’ “designated priorities” fund, similar to the USM “Course Redesign” project, for awarding seed grants to institutions to implement the civic learning and civic engagement recommendations.

Recommendation for USM Institutions:

I. Create a mechanism, such as a “Civic Investment Plan”¹² that captures and sets forth plans to strengthen significant institutional commitment to civic learning and civic engagement and details resources being used and resources needed:

- Multiple incentives for embracing public purposes and greater civic involvement;
- Learning outcomes explicitly defined in courses and curricula;
- Incentives for student affairs to develop public-oriented leadership programs and activities;
- Training and support for faculty to create civic engagement courses and collaborations and offer opportunities on how to approach difficult conversations with students inside and outside of the classroom; and
- Recognition and rewards for faculty who develop and implement innovative civic engagement and education pedagogies in their courses.

ALTERNATIVE(S): The Committee may accept the recommendations, ask for more information, or suggest modifications.

FISCAL IMPACT: For consideration by the regents.

CHANCELLOR’S RECOMMENDATION: That the Committee on Education Policy and Student Life recommend that the Board of Regents approve the recommendations within the Report of the Regents’ Workgroup on Civic Education and Civic Engagement.

COMMITTEE RECOMMENDATION:	DATE:
BOARD ACTION:	DATE:
SUBMITTED BY: Joann A. Boughman	301-445-1992
	jboughman@usmd.edu



**USM Board of Regents Workgroup Report
Civic Learning and Democratic Engagement**

**Presented to:
Board of Regents
Education Policy and Student Life Committee
May 15, 2018**

**Submitted by:
USM Board of Regents Workgroup
Civic Education and Civic Engagement**

Executive Summary

The Board of Regents Civic Education Workgroup was charged to make recommendations for system-wide initiatives to help our students graduate as more active and effective citizens. The group's mission was focused on civic education, civic engagement, and civic responsibility.

The work of the group was guided by foundational definitions of the three inter-related but different areas of emphasis in the group's charge. USM's goal is to graduate civically-literate students, who are prepared to accept their responsibilities as citizens in a complex and global interdependent world:

$$\boxed{\text{Civic Education}} + \boxed{\text{Civic Engagement}} \Rightarrow \boxed{\text{Civic Responsibility}}$$

Further, the work was grounded in research on national models from higher education associations and best practices across states, systems, and institutions. The work also drew on the considerable expertise of the workgroup members and USM faculty and staff who are recognized leaders in civic education and civic engagement. In addition, USM conducted a survey of all USM institutions to collect information about current practice and ongoing initiatives, and to gain a better understanding of the work, accomplishments, and challenges facing USM institutions as they deliver on the promise of graduating educated and engaged citizens for a changing world.

Summary of Recommendations

1. *Foster an ethos of civic engagement and participation across all parts of all institutions and throughout the educational culture.*
 - Encourage Carnegie *Community Engagement* classification for all institutions in USM. Consider offering incentives through partnership grants for institutions to help each other (those that have earned classification can help institutions that are on the path).
 - Encourage voting by using the National Study of Learning, Voting and Engagement (NSLVE) data to document and assess progress toward higher voter participation from each institution. Share reports with USM office.
 - Consider the development of a "badge" to designate student level competencies in civic learning and democratic engagement.
2. *Identify civic literacy as a core expectation for all students.*
 - Expand opportunities for service/action learning for undergraduate students in all majors to engage in real world applications of their learning through coursework and through community leadership programs.
 - Expand opportunities for civic learning and engagement for graduate students as it applies to their programs of study.
 - Align civic learning and democratic engagement goals with Carnegie *Community Engagement* standards, and have institutions report progress toward agreed upon goals.
 - Establish the *Civic Learning and Democratic Engagement Workgroup* as an ongoing USM workgroup with responsibility for defining goals (in collaboration with

institutions), developing and analyzing a System-wide survey, and overseeing the progress toward goals.

- Consider establishing a Regents' "designated priorities" fund, similar to the USM "Course Redesign" project, for awarding seed grants to institutions to implement the civic learning and civic engagement recommendations.

**University System of Maryland Board of Regents
Education Policy and Student Life Committee
Civic Education Workgroup**

February 2018

Dr. Joann Boughman

Senior Vice Chancellor Academic and
Student Affairs
University System of Maryland

Dr. Antoinette Coleman

Associate Vice Chancellor for
Academic Programs and Faculty
University System of Maryland

Dr. Wayne V. McIntosh

Professor & Associate Dean
College of Behavioral and Social Sciences
University of Maryland, College Park

Dr. Deb Moriarty

Vice President for Student Affairs
Towson University

Dr. Karen Olmstead

Interim Provost & Senior VP for Academic
Affairs
Salisbury University

Staff Advisor

Ms. Stephanie Hall

Graduate Assistant, P-20 Education
University System of Maryland

Dr. Alison McCartney

Professor, Political Science
Towson University

Dr. Nancy Shapiro

Associate Vice Chancellor for Education
and Outreach
University System of Maryland

Mr. William Shorter

USM Board of Regents, Student Regent

Mr. Tom Slater

Former Member, USM Board of Regents
& Attorney

Dr. Darlene Smith

Executive Vice President and Provost
University of Baltimore

Dr. Roger Ward, JD, MPA

Vice President for Operations and
Institutional Effectiveness,
Vice Dean, Graduate School
University of Maryland, Baltimore

Mr. Dewayne Morgan

P-20 Program Director and Evaluator
University System of Maryland

Ms. Nancy O'Neill

Associate Director, William E. Kirwan
Center for Academic Innovation
University System of Maryland

Introduction

In April 2017, the University of Maryland, Baltimore hosted the *Langenberg Lecture and Symposium: Civic Education, Civic Engagement, and Civic Responsibility: Foundations of a Democratic Society*.¹ The event was sponsored by the University System of Maryland and the USM Foundation in collaboration with Maryland Association of Community Colleges, the Maryland Higher Education Commission, the Maryland Independent College and University Association, and the Maryland State Department of Education. The Honorable Barbara Mikulski presented the keynote lecture, and the day-long symposium featured breakout sessions for practitioners from across the P-20 (Pre-school through graduate school and workforce) spectrum to engage in discussions about the role of higher education in democracy.

Momentum around this issue has grown steadily, and USM has remained at the forefront. In June 2017, the Education Policy and Student Life Committee of the Board of Regents established a Civic Education Workgroup:

to make recommendations for system-wide initiatives to help our students graduate as more active and effective citizens. The group's three-part mission is focused on civic education, civic engagement, and civic responsibility.

This is not the first time that the Board of Regents of the University System of Maryland has considered and emphatically endorsed a System-wide commitment to civic education. In the 2010 strategic plan, *Powering Maryland Forward*, the USM Board of Regents adopted a goal to develop and implement a “Maryland Compact for Student Learning, Leadership Development, and Civic Engagement” specifying what the Board of Regents and institutions expect all USM graduates to know and be able to do.² The key question asked then, offers a starting place for the current work: How should the BOR develop, articulate, and monitor appropriate System-wide expectations for student learning and preparation in such critical areas as global, cultural, and environmental awareness; information technology literacy; and the exercise of civic responsibility and ethical leadership?

Chancellor Robert Caret focused his keynote address to the American Association of State Colleges and Universities (AASCU) annual meeting (October 2017, see Appendix A) on this very challenge. Quoting Franklin Delano Roosevelt, Chancellor Caret challenged the assembly: “Democracy cannot succeed unless those who express their choice are prepared to choose wisely. The real safeguard of democracy, therefore, is education.” He continued his remarks raising the alarm for public higher education:

I believe there is a new sense of urgency on this front. Given the current cultural landscape of divisiveness and polarization, and the troubling trends in America’s overall civic health, we face what has been called a “crucible moment” that demands action from the higher education community. And when you consider that approximately 75 percent of students in college attend a state college or university, it will be *public* higher education that drives this effort, with a nationwide, state-by-state commitment.

¹ <http://www.usmd.edu/usm/academicaffairs/civic-engagement/>

² *Powering Maryland Forward: USM's 2020 Plan for More Degrees, A Stronger Innovation Economy, A Higher Quality of Life*, Adopted by The University System of Maryland Board of Regents 12.3.10, p. 19.

The USM BOR Civic Education Workgroup met throughout the fall 2017 and into spring 2018. The workgroup researched national models from higher education associations; looked for best practices across states, systems, and institutions; and drew on the considerable expertise of the workgroup members and USM faculty and staff who are recognized leaders in civic education and civic engagement. In addition, USM conducted a survey of all USM institutions to collect information about current practice and ongoing initiatives, and to gain a better understanding of the work, the accomplishments, and the challenges facing USM institutions as they deliver on the promise of graduating educated and engaged citizens for a changing world.

This report is organized into four sections, with an executive summary: (1) introduction, including foundational definitions of civic education, civic engagement and civic responsibility; (2) review and summary of background research drawn from national reports, and a scan of other state and system models; (3) summary of responses from the USM institutional survey; and (4) recommendations targeted to both the institutions and to the University System, and conclusion.

Foundational Definitions

The charge to this workgroup laid out three inter-related but different areas of emphasis, with the goal of graduating civically literate students, who are prepared to accept their responsibilities as citizens in a complex and global interdependent world.

$$\boxed{\text{Civic Education}} + \boxed{\text{Civic Engagement}} \Rightarrow \boxed{\text{Civic Responsibility}}$$

In January 2018, the workgroup surveyed the USM institutions to identify key priorities in the areas of civic education, civic engagement, and civic responsibility. The findings from the survey are detailed in the following section of the report, but based on the responses, we recommend adopting shared, operational definitions of civic learning and democratic engagement, many of which were reflected in the report of the *National Task Force on Civic Learning and Democratic Engagement* (2012, updated in 2016). The elements listed below characterize civic-minded institutions of higher education in the 21st century.

(1) Definition of Civic Education:

In its broadest definition, “civic education” means all the processes that affect people's beliefs, commitments, capabilities, and actions as members or prospective members of communities.³ Any definition of civic education should call out specific knowledge and skills that citizens in a democracy need to carry out their civic responsibility.

³ Stanford Encyclopedia of Philosophy, <https://plato.stanford.edu/entries/civic-education/>

The list below has been adapted from *A Crucible Moment: College Learning and Democracy's Future*,⁴ and has been reframed in terms of USM's overriding commitment to *equity, diversity, inclusion, and civic engagement*.

Civic Education Knowledge:

- Familiarity with key democratic texts, and universal democratic principles, and significant debates—in the US and in other societies—concerning their applications;
- Understanding of the historical, economic, and political contexts of the US government;
- Understanding of how to access voting and political representation systems;
- Knowledge of the political systems that frame constitutional democracies and political and social levers for influencing change;
- Knowledge of the diverse cultures, histories, values, and significant debates that have shaped US and other world societies;
- Understanding of key issues in society and how different groups are impacted by government processes and decisions;
- Exposure to multiple traditions drawing on views about religion, government, race; and,
- Understanding ethnicity, gender, education, ability, family structures and the economy from multiple intellectual traditions as well as students' own perspectives.

Civic Education Skills:

- Civility and civil discourse in both oral and written communication;
- Information and media literacy, including gathering and evaluating multiple sources of evidence and seeking and being informed by multiple perspectives;
- Ability to work across differences toward collaborative decision making; and,
- Understanding of how to work with community groups and members to identify and solve problems.

(2) Definition of Civic Engagement:

Civic engagement promotes an understanding and awareness of the world and one's role in it, helping to prepare students to become responsible citizens.

Civic engagement:

- Builds upon the knowledge and skills of civic education by providing students with opportunities to work with their communities;
- Connects students with their communities by creating access points;
- Expands their knowledge of democracy in practice through direct participation;
- Includes individual and group reflections which examine democratic institutions, policies, principles, rights, and values and reinforces civic learning;

⁴ National Task Force on Civic Learning and Democratic Engagement (2012). *A Crucible Moment: College Learning and Democracy's Future*. Washington, DC: Association of American Colleges and Universities.

- Provides context for exploring the sources of and potential solutions for problems associated with the functioning of a democracy; and,
- Develops capacities for leadership in the larger community.

(3) Definition of Civic Responsibility:

Civic responsibility is the culminating outcome of this work. Building upon civic education and civic engagement, civic responsibility incorporates democratic values and practices and leads to individual and collective action for the public good.

Values and Practices include:

- Respect for freedom and human dignity for all;
- Civil discourse and respect;
- Empathy;
- Open-mindedness, inclusion, and tolerance;
- Justice and equality;
- Ethical integrity;
- Commitment to regular community participation; and,
- Responsibility to a greater good.

Summary of National Reports and Initiatives

The Workgroup began by reviewing the findings and recommendations of the outstanding national reports that have had considerable influence across higher education over the past ten years. These reports helped inform the workgroup as it developed definitions and goals around civic education for the University System of Maryland.

A Crucible Moment: Civic Learning and Democracy's Future (2012, 2016)

In January 2012, the AACU's National Task Force on Civic Learning and Democratic Engagement (CLDE) released *A Crucible Moment: College Learning and Democracy's Future*. The National Task Force convened a series of national roundtables and circulated draft reports for broad public comment over the course of the year prior to adoption and publication. *A Crucible Moment* underscored the importance and urgency of increasing attention to what the Task Force termed "anemic US civic health" (p. 6). Some indicators included:

- U.S. ranking 139th in voter participation of 172 world democracies in 2007,
- only 10 percent of U.S. citizens contacting a public official in 2009-2010, and
- less than half of 12th graders in the U.S. studying international topics as part of their civics education.

The 2012 report called on higher education to reclaim its mission, making civic learning an expectation, not an option in college. Specifically, the report charged higher education to move aggressively to increase student knowledge about civic ethos, literacy, inquiry, and action by making learning opportunities pervasive across general education and majors throughout the college experience.

In 2016, AACU updated the original report by presenting examples of colleges and universities that implemented the recommendations in *A Crucible Moment* to advance civic commitments. Some institutions created new strategic plans and frameworks around civic engagement, others invested in faculty development institutes, while still others used the report to train student

leaders or to engage community partners. The 2016 update also highlighted the work of the Massachusetts Board of Higher Education in adopting a statewide policy on civic learning in all public colleges and universities in the state.

The American Democracy Project, AASCU

The American Association of State Colleges and Universities (AASCU) established the American Democracy Project (ADP) as a nonpartisan initiative in 2003 to equip college graduates with knowledge, skills, attitudes, and experiences necessary to be informed and engaged members of their communities. ADP works through a multi-campus network across 46 states and the District of Columbia. ADP hosts national and regional meetings, runs a national assessment project, and sponsors many crucial campus-based initiatives including voter education, curriculum revision, speaker series, and campus audits.

One outstanding project that is part of the ADP is the Civic Fellows Program. Civic Fellows are state college or university faculty members appointed for one-year terms to work on assessment, research, and programmatic efforts to support ADP's mission. *USM can boast that Dr. David Hoffman, Assistant Director of Student Life for Civic Agency at UMBC was a 2017 Civic Fellow. Hoffman is spearheading a project entitled Emergent Theory of Change which reconsiders our thinking about the purposes, learning outcomes, pedagogies, and strategies associated with civic learning and democratic engagement in higher education.*

Fellows work with the ADP steering committee to design and advance a number of creative and influential national initiatives:

- *Digital Polarization*: Builds student civic and information literacy in online spaces through a broad, cross-institutional effort to fact-check and provide context for emergent news stories promulgated by social media.
- *Economic Inequality*: Studies the impact of economic inequality on our democracy and functions via mini-grants given to institutions interested in developing or implementing interactive curricula along these lines. Salisbury University is a participating institution.
- *Political Engagement*: Is designed for campuses to infuse political education and engagement tactics into a variety of disciplines and courses on campus.
- *Stewardship of Public Lands*: Partners faculty from participating institutions with Yellowstone National Park to study controversies about the park's wildlife and land use. 180 faculty from 80 campuses have participated to date.

Five Maryland institutions participate with the American Democracy Project: Coppin, Frostburg, Salisbury, Towson, and UMBC. Towson and UMBC were part of the 2003 founding network.

Campus Compact Presidents' Declaration

Campus Compact is a national coalition of over 1,000 colleges and universities focused on building democracy through civic education and community development. Campus Compact was founded in 1985 by the presidents of Brown, Georgetown, and Stanford Universities along with the president of the Education Commission of the States to help colleges and universities create more robust support structures for community engagement. Specifically, offices and staff coordinated community engagement efforts; training for faculty members to integrate community work into their teaching and research, scholarships, and student incentives; and

institutional priority setting. Campus Compact shares knowledge from research and practice on high impact practices for student civic learning and support for the institutional systems, policy, and activities that reinforce learning and advance the public purposes of higher education. The three impact areas of focus are:

- Institutional Action and Partnership;
- Teaching and Research; and,
- Higher Education for Democracy.

Campus Compact hosts an annual Newman Civic Fellowship program. *2017 fellows from Campus Compact Mid-Atlantic (CCMS) included five USM students from: Frostburg, Towson, University of Maryland, College Park, UMES, and UMBC. 2018 fellows include USM students from Coppin, Frostburg, Towson, UB, UMES, and UMBC.*

The Campus Compact Mid-Atlantic (CCMA) region is formed by colleges and universities from Maryland, DC, and Delaware. Nine USM campuses (listed in Table 2 below) are a part of CCMA. Dr. Maria Thompson, president of Coppin State University recently joined the CCMA board.

In 2000, Campus Compact produced a *Presidents' Declaration on the Civic Responsibility of Higher Education*. This declaration urged all college presidents to seek recognition of civic responsibility and accreditation procedures, Carnegie classifications, and national rankings, and to work within their states to set expectations for civic engagement in public systems. The declaration envisioned robust debate on campuses, civic behaviors of students, civic engagement of faculty, and improved community life through community-institution partnerships. The call to action was made urgent by childhood poverty rates and high unemployment rates despite the general health of the economy. The call also emphasized pluralism inherent in US society and the role the higher education should play in helping students respect difference and work together for the common good.

Carnegie Classification for Community Engagement

The Carnegie Classification for Community Engagement is an elective classification for individual institutions that involves data collection and documentation of aspects of institutional mission, identity, and commitments. The evidence-based review process for the classification is one of self-assessment and quality improvement. There are 361 campuses with the elective classification, which opens for applications on a five-year cycle. The 2020 cycle opened in January 2018.

Two USM institutions have earned Carnegie Classification for Community Engagement: Towson University and the University of Baltimore. Six more are in the process of applying for the 2020 cycle: Coppin State University, Frostburg State University, Salisbury University, UMBC, and the University of Maryland Baltimore (UMB), University of Maryland, Eastern Shore.

Carnegie Classification for Community Engagement began in 2006. At that time, campuses could choose to be classified based on their curricular engagement *or* their community engagement, outreach and partnerships (or both). Beginning in 2010, there was only one

classification –community engagement – which requires substantial commitment in areas of curricular engagement and outreach and partnerships.

The Carnegie Classification defines community engagement as “collaboration between higher education institutions and their larger communities (local, regional/state, national, global) for the mutually beneficial exchange of knowledge and resources in a context of partnership and reciprocity. The purpose of community engagement is the partnership of college and university knowledge and resources with those of the public and private sectors to enrich scholarship, research, and creative activity; enhance curriculum, teaching and learning; prepare educated, engaged citizens; strengthen democratic values and civic responsibility; address critical societal issues; and contribute to the public good.” Carnegie’s “community engagement” is aligned with this report’s “civic engagement.”

The National Study of Learning, Voting, and Engagement (NSLVE)

Created in 2012, NSLVE is an initiative of the Institute for Democracy and Higher Education (IDHE) at Tufts University that was initiated in direct response to the 2012 call to action found in *A Crucible Moment*. NSLVE is a national study of student voter registration and voting rates as well as campus climate, student political learning and engagement, and correlations between specific student learning experiences and voting. Higher education institutions can participate in NSLVE for free. The IDHE coordinates between National Student Clearinghouse records and an independent agency that tracks voter registration and voting. Currently, more than 1,000 campuses, representing 8.5 million student records, across 50 states and all institutional types participate. NSLVE produces reports about national trends as well as reports for individual campuses that include voter registration and voting rates; voting methods; and each of these items by age group, program of study, enrollment status, gender, race/ethnicity, and field of study. Campus reports include comparisons to other institutions and national averages, offering a rich analysis that is useful for campus reflection and goal setting.

As of February 2018, all 12 USM institutions are subscribed to NSLVE and will receive institution-level data from the November 2018 election.

Participating in NSLVE will also compliment the Maryland General Assembly “Freedom to Vote Act of 2016” requiring public institutions of higher education to provide a link to the online voter registration system on the home page of the online portal used by students to register for course work, and to report to the Maryland Higher Education Commission the number of students who clicked on the link, and any efforts the universities make to improve access to voter registration.

A National Model: Massachusetts Department of Higher Education

At the suggestion of Chancellor Caret, and the highlighted policy example in the 2016 *Crucible Moment*, the workgroup also examined the State of Massachusetts Commission on Higher Education’s policy on civic learning. In October 2013, the Massachusetts Department of Higher Education (MDHE) submitted a report: “Preparing Citizens: Report on Civic Learning and Engagement,” which contained policy recommendations for the MDHE. The workgroup invited Dr. John Reiff, leader of the civic learning initiative at the MDHE to brief our USM BOR

workgroup on the process the state of Massachusetts went through to develop guidelines and policies related to civic learning. The USM workgroup adapted Massachusetts' institutional inventory of civic learning as a model for the USM survey. The USM survey was distributed to institutions in December 2017 and results were analyzed in January 2018 and presented to the workgroup in February 2018. (Survey analysis and results can be found in the last section of this report.)

The Massachusetts case study was outstanding for several reasons. First, it established that a primary goal of higher education in the state is "preparing citizens". The state's education leaders identified the poor state of American civic understanding among its postsecondary students as a compelling reason to recommit and reinvest in preparing students for citizenship by making civic literacy a core expectation for all students. Second, the Massachusetts study group developed an assessment framework with strategies and indicators for building civic learning capacity through:

Institutional Support

- Practices such as alignment with institutional mission and inclusion in strategic planning and evaluation system
- Structures including designating a coordinating entity for civic learning at the institution

Faculty Support

- Professional development, inclusion of civic learning in faculty recruitment, hiring, recognition, promotion and tenure, and leadership development

Student Support

- Benchmarks for student learning outcomes and assessment, community-engaged course designation, student recognition, and funding for and development of extra/co-curricular opportunities

Community Support

- Outreach, recruitment and recognition of community partners, development of mechanisms for partner advisory role, and feedback that ensures mutual/reciprocal benefit.

Finally, the Massachusetts case study identified obstacles and shortcomings that the USM workgroup also noted as challenges:

- A lack of available data on student learning outcomes, community engagement participation, designations for qualifying civic education courses and co-curricular participation
- An absence of assessment tools and rubrics for student learning outcomes and course development
- A lack of dedicated resources for faculty development, community engagement, internships

The USM workgroup found the presentation by John Reiff and the detailed materials from the Massachusetts Higher Education Study Group on Civic Learning and Engagement to be valuable resources that informed our research and our recommendations (see Appendix B for materials).

Summary of the 2017 Survey of USM Institutions

As a result of the recommendation from, and with assistance from, Dr. John Reiff (Massachusetts), USM developed a survey to better understand how each USM institution has implemented their civic education mission within curricular and co-curricular structures (see Appendix C for complete survey). Although we did not limit responses, most of the USM institutions responded with reference to their undergraduate programs.

We recommended that the academic affairs and student affairs units at the institution collaborate to provide institution-wide answers to the survey. All 12 institutions responded, and the results suggest that as a System, USM is deeply committed to preparing students for effective civic participation; however, it was also clear that the collective impact will benefit from stronger collaborations across institutions, greater attention to curricular and co-curricular opportunities for civic learning, enhanced professional development for faculty, and dedicated resources to support these priorities.

It should be noted that the institutions provided more information than we can capture in a summary report. We hope there will be an opportunity to share the varied and diverse work from each of the institutions over time.

The survey was structured around several key questions:

1. How do institutions define and locate civic engagement?
2. What kinds of national and local partnerships and projects are institutions involved in?
3. How do institutions support or recognize civic education/civic engagement?
4. How do institutions define and assess student learning outcomes?
5. What limitations, barriers or challenges interfere with developing or further expanding civic learning opportunities for students?

As a result of USM's 2010 strategic plan, *Powering Maryland Forward*, we found that all 12 of the USM institutions have civic education or engagement embedded either in their institutional mission statements and/or vision statements, or in the mission statements of their undergraduate and/or graduate divisions.

Nine institutions have at least one dedicated civic education center or similar unit. Some are housed in Academic Affairs divisions and some within Student Affairs divisions:

Table 1: Institutional Offices with Civic Education and/or Engagement Responsibilities

Institution	Name of Center	Student Affairs	Academic Affairs	Other
Coppin	Dorothy I. Height Center for the Advancement of Social Justice		X	
	Bishop L. Robinson, Sr. Justice Institute		X	
Frostburg	Office of Civic Engagement	X		
Salisbury	Institute for Public Affairs and Civic Engagement (PACE)		X	
Towson	Office of Civic Engagement and Social Responsibility	X	X	
UB	Office of Transitions and Community Engagement	X		
	Schaeffer Center for Public Policy			X
	Jacob France Institute			X
UMB ⁵	Office of Community Engagement			VP External Relations
	Department of Interprofessional Service Learning and Student Initiatives (ISLSI)	X		
UMBC	Shriver Center		X	
	AACU TRHT Campus Center (1 of 10 nationwide, AACU initiative)			X
	Institute for Democracy and Civic Life ⁶			
UMCP ⁷	Office of Community Engagement			VP Administration & Finance
	Office of Leadership and Community Service Learning	X		
UMES	Office of University Engagement and Lifelong Learning	X		

⁵ Other UMB offices dedicated to civic engagement include: Cure Scholars Program, Center for Dispute Resolution, Maryland Public Interest Law Project, and the Social Work Outreach Service (SWCOS). A complete list of such offices can be found here: <http://cf.umaryland.edu/oce/>

⁶ This institute will launch on July 1, 2018.

⁷ Other UMCP programs also have dedicated offices, such as: College Park Scholars - Public Leaders, Sustainability, Maryland Extension in Riverdale; The Do Good Institute; The Maryland Food Recovery Network was incubated at UMCP; CIVICUS Living & Learning Program; Global Communities Living & Learning Program; Justice & Legal Thought Living & Learning Program; Beyond the Classroom Living & Learning Program; Law & Society Minor, Federal Semester Fellows Program; Global Semester Fellows Program; Maryland Internship Program; Campus Fabric Coalition of 80 faculty, Staff and student from 30 units on campus, Campus & Community Engagement at The Clarice Smith Performing Arts Center.

These centers are supported through different offices and institutional organizational units. For example:

- UMES's Office of UELL is funded by Title III grant funding;
- Salisbury's PACE Institute has a state-funded budget and seeks grant opportunities;
- UMBC's Shriver Center relies on institutional funding as well as contracts, grants, and gifts from non-profit and government agencies, foundations, and fundraising; and,
- CSU's Dorothy Height Center is funded through grants.

What kinds of national and local partnerships and projects are institutions involved in?

Again, almost all USM institutions are already working through national and local efforts to make civic learning and engagement meaningful, pervasive, and sustainable.

As previously noted, the Carnegie Community Engagement Classification is a highly selective and valued recognition. Achieving the classification not only requires substantial commitments to curriculum-based engagement as well as outreach and partnership, but the exercise of applying for the classification also requires a focused and unified cross-institutional effort.

Of the 12 USM institutions, eight have or are planning to apply for Carnegie Community Engagement Classification.⁸ The next application cycle for this classification is in 2020. Coppin, Frostburg, Salisbury, UMBC, UMES and UMB have indicated that they plan to apply in 2020. University of Baltimore earned Carnegie Community Engagement Classification in 2006 and is reapplying, and Towson earned Carnegie Community Engagement Classification in 2008 and was recertified in 2015.

In addition, five institutions have received President's Higher Education Community Service Honor Roll recognition.⁹

Table 2 presents the broad range of local and national partnerships/projects across all institutions.

⁸ <https://www.brown.edu/swearer/carnegie>

⁹ <https://www.nationalservice.gov/special-initiatives/honor-roll>

Table 2: Civic Education Partnerships of USM Institutions

	BSU	CSU	FSU	SU	TU	UB	UMB	UMBC	UMCP	UMES	UMUC
Carnegie Classification (earned or actively pursuing)		X	X	X	X	X	X	X		X	
President's National Honor Roll			X		X	X		X	X		
AACU Bringing Theory to Practice			X		X					X	
LEAP											
Campus Compact	X	X	X		X	X	X	X	X	X	
National Study of Learning, Voting, and Engagement			X	X	X	X		X	X		
American Democracy Project		X	X	X	X			X			
NASPA Lead Initiative			X		X	X					
Andrew Goodman Foundation Vote Everywhere Initiative					X	X					
AASCU Re-Imagining the First Year				X							
Big 10 Democracy Challenge									X		
Baltimore College Coalition									X		
BUILD Baltimore								X			
Baltimore Integration Partnership					X	X	X				
The JustAdvice Project							X				
ETS HEIghten Pilot Study	X										
ACE-NASH Leadership Academy, Taking HIPs to Scale	X	X		X							
All-In Campus Democracy Challenge					X	X		X			
Imagining America Consortium								X			
Kettering Foundation								X			
Corporation for National and Community Service								X			
The Washington Center				X						X	
Maryland Humanities/National Humanities Alliance				X							
National Academy of Engineering Grand Challenges								X		X	
National Council on Public History								X			
US Holocaust Museum National Campus Leaders Summit								X			
Drug Free Communities										X	
Peace Corps								X		X	
International Association for Research on Service Learning and Community Engagement								X			

How are students involved in civic education and civic engagement activities?

Co-curricular civic engagement: All institutions offer some co-curricular opportunities that promote civic education and civic engagement, but that does not mean that all students have access to those opportunities. One of the challenges that was raised by several institutions is that more opportunities will increase access and participation. For example:

- Bowie offers study abroad opportunities and special speakers series and student leadership workshops.
- The Nonprofit Leadership Certification program at Salisbury and Coppin are co-curricular programs operating in cooperation with the Nonprofit Leadership Alliance (NLA). Requirements for this certification include one two-credit course, a 300-hour internship experience, and participation in a national NLA conference that includes professional development activities for students seeking to work in the nonprofit sector.
- UMB's Office of Community Engagement actively recruits students to volunteer to serve as mentors in their CURE scholars program and PTECH High School. The Interprofessional Student Learning & Services Initiatives coordinates university-wide activities, programs, and services that foster students' academic, personal, and professional development through community engagement.
- Frostburg's Beall Institute for Public Affairs provides students with paid internships on Capitol Hill and in Annapolis.
- At Coppin, each year students participate in a study abroad program through a partnership with Chonnam National University in South Korea.
- At Coppin, accounting students are involved in the VITA Program through which 820 tax returns were completed for 2018 as a service to the community.
- UB's Schaefer Center for Public Policy facilitates student involvement and assistance with its annual Baltimore City Election Judge Training.

Curricular civic engagement: There are two dominant approaches to curricular civic engagement opportunities: those that cut across the institution and curriculum and those that are program-specific. All institutions which could set civic education outcomes or goals related to civic engagement dispositions, indicated that they do consider the topic in relation to student goals. Seven institutions explicitly include civic engagement outcomes in their descriptions of general education curricula: Coppin, Frostburg, Salisbury, UB, UMB, UMCP, and UMUC.

UMES has community service embedded within a First Year Experience general education course. In the survey, Bowie State University, Towson University, and UMBC indicated that student outcomes are embedded within some courses/programs and/or student affairs programming. In addition, Bowie State, as a part of the ACE-NASH Leadership program, is compiling an inventory of High Impact Practices (HIP) which includes civic engagement outcomes.

Institutions that include civic engagement in their general education curriculum do so in different ways. Coppin embeds civic engagement in its general education curriculum via community engagement infused as a student learning outcome: Social Awareness, Reflective Practice, and Responsive Citizenship. This outcome emphasizes "understanding self and to embrace their responsibilities as engaged citizens and informed leaders in service within the community."

UMCP embeds outcomes that reflect the goals of civic education in various general education requirement categories. In the History and Social Sciences general education category, at least three outcomes reflect the goals of civic education:

1. Explain how culture, social structure, diversity, or other key elements of historical context have an impact on individual perception, action, and values.
2. Articulate how historical change shapes ideas and social and political structures.
3. Explain how history or social science can be used to analyze contemporary issues and to develop policies for social change.

UMCP reports that the Foxworth Creative Enterprise Initiative in the College of Arts and Humanities provides seed money for faculty to plan courses in which students design community outreach programs to tackle problems like poverty, racism, and gender inequality. Some of these courses may be approved as General Education courses.

At Salisbury University, one of the dispositions listed in the Student Learning Principles and goals is Social Responsibility: “tolerance and respect for diverse groups of people and a disposition toward responsible citizenship and a connection to the community.” And UB integrates experiential learning throughout general education and the majors to help students achieve the undergraduate learning goals. An example of this is that all UB College of Public Affairs undergraduate programs require students to complete an internship and/or field placement. UB also provides opportunities and some support for students to participate in:

- community engagement,
- undergraduate research,
- study abroad, and
- problem-based learning in applied settings.

Frostburg’s General Education Program states “[students] will develop the foundational skills necessary to critically explore, evaluate, and define your values and become responsible citizens in a complex and changing society, [and] exhibit civic responsibility and leadership.” Further, Frostburg’s Strategic Plan of the Division of Student Affairs includes a commitment to civic engagement, which is reflected in the Division’s programs, services, and resource allocations.

UMB is committed to integrating civic education and civility across all aspects of the university. One example is the definition of civic engagement learning outcomes in the Office of Academic Affairs Campus Life Services.

The responses to the survey indicated that those institutions that do not already have broad learning outcomes associated with civic learning and civic engagement are enthusiastic and committed to defining such learning outcomes within their missions, and those institutions already working with civic learning outcomes are equally enthusiastic about incorporating new pedagogical approaches to civic learning.

Inclusive civic education and engagement: Five institutions reported that all students have an opportunity to take at least one course that has a service learning component. At some institutions, service learning is broadened into “action learning.” In both cases, however, institutions pointed out an important gap between opportunity for service/action learning and

participation in service/action learning, because there is a fiscal impact for making such access universal. The survey responses converged on the concern about resources. The greatest challenge to having all students involved in service learning is a lack of resources. UMBC, for example, reported that if all students opted to take a service learning course, as is technically available to them, significantly more resources would be required than currently exist. The institution's new strategic plan has UMBC studying participation rates and characteristics of students who do not participate in these opportunities. In another case, UMB's Dr. Lori Edwards offers a 1-credit course entitled *Social Justice and Our Community* which is open to all students once a year. Within the course, students get hands-on professional experience with community health programs by working with community partners surrounding the UMB campus. And UB reported plans to explore the development of course-embedded service learning opportunities for all students via their new strategic plan, but again, cited resources as a challenge to universal access. CSU has courses in their nursing program which include service learning experience helping community agencies address caregiver support, stress management and other community health issues.

Those USM institutions which do not currently have such opportunities for all students, reported interest in creating such opportunities, if appropriate resources could be made available.

How are USM institutional leaders effecting change?

Much of the information gathered in the campus surveys focused on undergraduate curricular and co-curricular programs and opportunities, but it would be a mistake to assume that a campus commitment to civic engagement is limited to undergraduates. There are many opportunities to involve graduate students and faculty in "the spirit of public-mindedness that influences the goals of the institution and its engagement with local and global communities." (*A Crucible Moment*, 2012, p. 15).

UMCES cited activities that fall under the service aspects of their mission. For them, civic engagement comes through the application of science to real world environmental problems, providing advice to government agencies charged with developing and implementing environmental policy, and communicating science to the public. Their mission, to teach and practice environmental awareness, defines who they are.

UMB, Towson, and UB are involved in the *Baltimore Integration Project* (BIP). BIP has received national recognition as a way to strengthen "anchor institution" engagement by hiring and purchasing locally. The BIP "anchor institution" idea has received support from the highest leadership levels at every higher education institution in Baltimore City. BIP approaches its work through a racial equity lens. Anchor institutions have raised issues of structural racism, and by introducing changes at the top, have begun to address this decades-old problem in Baltimore. The leaders of the USM institutions in Baltimore are leading by example.

Student Opportunities and Outcomes: Accountability and Reporting

Seven of the 12 institutions already have a method of identifying courses or programs that support civic engagement: Coppin, Salisbury, Towson, UB, UMBC, UMES, and UMUC.

This is a promising development, since lack of data posed a significant challenge to the implementation of the Massachusetts policy recommendations. Being able to flag civic learning opportunities gives institutional research offices a way of measuring access and success in these courses and programs. However, on the survey, many institutions recognized that even with the designations on courses and programs, the research offices do not always have a way of capturing civic engagement activity and learning that occurs outside of the academic sphere.

UB and UMES offer two examples of how institutions track civic learning opportunities and outcomes. UB has an undergraduate learning goal mapped to their General Education and graduation requirements student learning outcomes. UMES's Office of University Engagement and Lifelong Learning tracks civic learning and engagement by type, and by cost-savings to the state associated with student volunteer hours.

The "Campus Fabric Coalition" at UMCP, an informal, grass-roots organization of 80 faculty, staff, and students from 30 units, has begun to develop a comprehensive list of projects currently underway that have been initiated by students, faculty and staff from various units across the institution.

As an alternative to tracking classes or co-curricular activities with designated civic education curricular outcomes, some institutions use national surveys of students or participate in national studies to find out about student engagement levels and attitudes. Two such studies, NSSE (National Survey of Student Engagement) and NSLVE (National Study of Learning, Voting and Engagement) provide both internal data to institutions and national comparative data in their reports. NSSE surveys college freshmen and seniors to gauge their participation in programs and activities.¹⁰ NSLVE provides data for 2012, 2014, 2016, and future election years and informs institutions of student voter registration/voting rates and of their campus climate with regard to political learning and engagement.¹¹ Unlike NSSE, NSLVE is not a survey; the data is collected via the National Student Clearinghouse and publicly available voter registration records.

What does this mean for faculty?

To our credit as a System, all institutions reported that they support faculty in incorporating a diversity of opinions in and out of the classroom, but they indicated that they are well aware of the complexities of managing difficult conversations in and out of classrooms.

To say that the First Amendment applies to public-university campuses begins but does not end the discussion. Given the high stakes on this issue, our institutions see a need for thoughtful re-evaluation, discussion, and improved planning to find reasonable ways to sustain free speech and also protect campus constituencies. This challenge is being met on several campuses in different ways. For example:

¹⁰ <http://nsse.indiana.edu/html/about.cfm>

¹¹ See the NSLVE website for sample reports available to participating institutions: <https://idhe.tufts.edu/nslve>

- UMCP's Teaching and Learning Transformation Center runs workshops on managing sensitive topics in the classroom, and the Office of Faculty Affairs has hosted workshops on Academic Freedom and Free Speech. The Office of Diversity and Inclusion also answers requests from academic units and faculty seeking guidance on incorporating a diversity of opinions in and out of the classroom.
- UMES recently hosted an Innovations in Teaching and Learning Conference which included a thematic track dedicated to Diversity and the Inclusive Classroom.
- Frostburg has a chapter of the National Coalition Building Institute, which provides programs and workshops for students, faculty, and staff to address diversity and inclusion issues.
- Bowie offers faculty professional development before each fall and spring semester; topics include cultural diversity in the classroom.

The two options mentioned most often in the survey responses were (1) professional development offered through a teaching and learning center or (2) financial support for faculty to seek training outside the university through external programs and national conferences.

Three institutions reported they offer stipends, two offer grant support for civic engagement related projects, three incorporate civic engagement in faculty awards, and four consider or are considering civic engagement in promotion and tenure practices. UMBC and Salisbury offer two examples of how faculty recognition and support are embedded within their institutions. UMBC has been investing close to \$40,000 a year in *BreakingGround* grants to faculty to support the creation of courses and community projects in which students can develop and practice civic agency. More than 30 courses and 25 community projects have been launched or redesigned with this support since its beginning in 2013.

In 1999, Salisbury University launched PACE, The Institute for Public Affairs and Civic Engagement, to reinvigorate the idea of a state university as a place where civic and political involvement could be developed and where students' spirits of generosity and intellectual curiosity could foster engagement. PACE is a nonpartisan institute committed to civic learning, engaged citizenship, and community involvement that sparks interest in public affairs and civic life for the students and the communities of Maryland's Eastern Shore. SU defines civic engagement in broad terms, encompassing a wide range of activities through which citizens work together to improve the quality of life in their communities—locally, nationally, or even internationally. SU's mission states that democratic citizenship is embodied whenever people come together to define the public good, determine the processes by which they will seek this good, or reform policies and institutions that do not serve this good.

PACE maintains a variety of direct student learning opportunities including Presidential Citizen Scholars and the Informed and Engaged lecture series. In addition, PACE offers a 1-credit, interdisciplinary elective course that explores rotating topics, and a series of faculty development programs, including a 10-week intensive seminar that aids faculty in embedding civic engagement experiences in existing or planned coursework. The Faculty Fellows program provides research and pedagogical support for faculty wishing to examine or further embed civic engagement experiences in their classes.

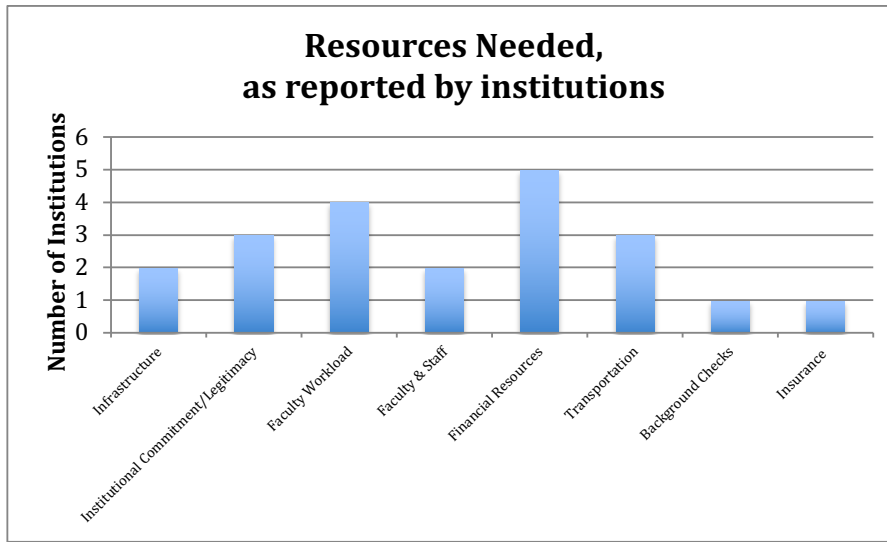
What do institutions report they need, and what do they want?

The institutions had a range of responses when it came to describing the challenges and impediments to establishing and/or growing the civic education and civic engagement programs on their campuses. While many institutions referenced resource constraints as a major challenge, the responses were all nuanced, and merit deeper analysis.

When asked what barriers exist to making civic engagement pervasive, institutions reported that it is challenging to connect the ideas and initiatives that may occur across a single institution. Two institutions cited a need for infrastructure that would track programs, manage logistics, and develop guidelines and standards. Specifically, institutions that do not already have a center or a point-person expressed a desire for a unit within academic or student affairs to provide leadership, oversight, and tracking of civic learning activities. To that end, some institutions reported that while a unit within academic affairs or student affairs can provide leadership and oversight, the typical organization of the university makes it difficult to create sustainable collaboration. Some institutions also cited a lack of clarity on the priority level of civic education and civic engagement due to competing university and departmental priorities. One institution pointed out the difficulty of achieving buy-in for initiatives that are not directly tied to faculty disciplinary specialties or departmental and college reward structures.

Other barriers which require consideration and resources included transportation, background checks, and faculty workload considerations. Transportation is required if students are to engage in community partnerships, and criminal background checks (which cost) are required when projects involve working with children. Depending on the project and location, insurance is sometimes required, which posed an additional financial consideration.

Finally, one institution pointed out how valuable it would be if students who have acquired certain civic skills and knowledge could demonstrate their proficiency to potential employers or graduate school admissions offices through a “badge,” or transcript designation. The Kirwan Center for Academic Innovation has started working on badging initiatives in some areas, and is looking into the possibility of badging civic competencies. The Carnegie Classification for Community Engagement recommends students receive such a designation, and the Workgroup urges USM to consider such a badging opportunity.



Several institutions pointed to a more fundamental, organizational challenge. They indicated that they had limited campus-level know-how or leadership around civic learning and engagement. This finding suggests that USM is poised to use our “system-ness” to build capacity across multiple institutions, similar to the USM approach to implementing academic innovation through the “Course Redesign” initiative. since we clearly have some national leaders as local resources.

A final concern raised in the survey responses might become a consideration for the Inclusion & Diversity Council, as well: how can we find ways to include and involve students who, for many different reasons, are left out, or are less likely to participate in curricular and co-curricular civic learning and democratic engagement opportunities across the institution?

Recommendations and Conclusion

Understanding democratic rights and responsibilities, having an appreciation for the diversity in the world that surrounds us, receptivity to hearing alternative points of view, and an inclination to treat others with empathy and respect, are the foundations of a functional community and a sustainable democratic government.

The purpose of this report and recommendations is to ensure that all graduates of USM institutions understand the national, global, and cultural contexts of our democracy and are prepared through both curricular and co-curricular learning experiences to contribute to and foster a civil society. USM institutions should create an environment where civic learning and democratic engagement are expected for every student. USM should model inclusion and civil discourse, particularly in a political environment dominated by caustic language and an unwillingness to compromise.

Recommendations

One of the essential take-aways from the USM survey is the mutual and integrated responsibilities of student affairs and academic affairs to develop and implement civic learning

and democratic engagement goals and strategies at each of the institutions. To continue supporting and deepen USM institutions' capacities to achieve these goals and enact these strategies, resources from USM are essential.

Based on the research of national models, and analysis of the USM institutional survey, the Civic Education Workgroup makes the following recommendations:

Recommendations for USM Institutions:

1. *Create a mechanism, such as a "Civic Investment Plan"¹² that captures and sets forth plans to strengthen significant institutional commitment to civic learning and civic engagement and details resources being used and resources needed:*
 - Multiple incentives for embracing public purposes and greater civic involvement;
 - Learning outcomes explicitly defined in courses and curricula;
 - Incentives for student affairs to develop public-oriented leadership programs and activities;
 - Training and support for faculty to create civic engagement courses and collaborations and offer opportunities on how to approach difficult conversations with students inside and outside of the classroom
 - Recognition and rewards for faculty who develop and implement innovative civic engagement and education pedagogies in their courses and who invest time in community-based teaching, research and service.

Recommendations for USM:

1. *Foster an ethos of civic engagement and participation across all parts of all institutions and throughout the educational culture.*
 - Encourage Carnegie *Community Engagement* classification for all institutions in USM. Consider offering incentives through partnership grants for institutions to help each other (those that have earned classification can help institutions that are on the path).
 - Encourage voting by using the National Study of Learning, Voting and Engagement (NSLVE) data to document and assess progress toward higher voter participation from each institution. Share reports with USM office.
 - Consider the development of a "badge" to designate student level competencies in civic learning and democratic engagement.
2. *Identify civic literacy as a core expectation for all students.*
 - Expand opportunities for service/action learning for undergraduate students in all majors to engage in real world applications of their learning through coursework and through community leadership programs.
 - Expand opportunities for civic learning and engagement for graduate students as it applies to their programs of study.
 - Align civic learning and democratic engagement goals with Carnegie *Community Engagement* standards, and have institutions report progress toward agreed upon goals.
 - Establish the *Civic Learning and Democratic Engagement Workgroup* as an ongoing USM workgroup with responsibility for defining goals (in collaboration with

¹² A Crucible Moment, p. 81.

institutions), developing and analyzing a System-wide survey, and overseeing the progress toward goals.

- Consider establishing a Regents’ “designated priorities” fund, similar to the USM Course Redesign project, for awarding seed grants to institutions to implement the civic learning and civic engagement recommendations.

Conclusion

In his keynote address to the Annual meeting of the American Association of State Colleges and Universities, Chancellor Robert Caret challenged the assembly:

Leaders of institutions of higher education must not shy away from the challenges. This is where leadership matters, and I recall a famous story: As Benjamin Franklin was leaving Independence Hall at the close of the Constitutional Convention of 1787, he was asked if we now have a republic or a monarchy. Franklin replied, “a republic . . . if you can keep it.”

Education, particularly public higher education, is a vital part of—and has a significant responsibility to—the republic. We must make it part of our mission to educate men and women who will keep it. The fact that so many aspects of our civic life have become dysfunctional, makes this effort all the more important and imperative. If we are committed, it can be our efforts that help move us from civic dysfunction to civic enlightenment.

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BOARD OF REGENTS

SUMMARY OF ITEM FOR ACTION,
INFORMATION, OR DISCUSSION

TOPIC: William E. Kirwan Center for Academic Innovation Update

COMMITTEE: Education Policy and Student Life

DATE OF COMMITTEE MEETING: Tuesday, May 15, 2018

SUMMARY: The USM's William E. Kirwan Center for Academic Innovation was established in June 2013 to enhance and promote the System's position as a national leader in higher education academic innovation. The Center's charge is to capitalize on recent findings from the learning sciences and the capabilities of emerging technologies to increase access, affordability, and outcomes of higher education. We are bringing together academic change leaders from across the System to identify ways we might improve the success of students, evaluate the feasibility of these approaches, share our findings, and scale-up and sustain promising models.

Working at the System level has been vital to the impact that the Center has had to date. Our position allows us to leverage the collective strengths of our diverse institutions, which are working together to support innovation across the USM. From this vantage point we have been able to:

1. Create a collaborative environment to support innovation both among the USM institutions and across the State of Maryland;
2. Incubate initiatives aimed at catalyzing change;
3. Remove barriers that block progress; and
4. Lead the national conversation on academic transformation.

Dr. MJ Bishop, Director of the Kirwan Center, will share an update on the Center's progress since her last report.

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 15, 2018

BOARD ACTION:

DATE:

SUBMITTED BY: Joann A. Boughman

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WILLIAM E. KIRWAN CENTER *for* ACADEMIC INNOVATION

Summary of Projects, Initiatives, and Ongoing Work – Spring 2018 (rev. 5 3 18)

The following is a summary of projects, initiatives, and ongoing work led by staff of the Kirwan Center for Academic Innovation. The projects and initiatives are listed first in alphabetical order and include links for further information, where applicable. Ongoing work is then summarized further below.

** Indicates projects that include community college partners. See Appendix for listing of specific institutions.*

Primary Projects and Initiatives

Maryland Open Source Textbook (M.O.S.T.) Initiative*

Summary: The Maryland Open Source Textbook (M.O.S.T.) Initiative began in 2013 to provide a statewide opportunity for faculty and institutions to explore the promise of open educational resources (OERs) to reduce students' cost of attendance while maintaining, or perhaps even improving, learning outcomes. OERs consist of any openly licensed instructional materials that are also available at little or no cost and can include textbooks, course readings, and other learning content; simulations, games, and other learning applications; syllabi, quizzes, and assessment tools; and virtually any other material that can be used for instructional purposes. In 2017, M.O.S.T. launched the High-impact OER Mini-Grant Program to enhance the Kirwan Center's OER efforts by targeting high-enrollment courses with existing quality OERs at two- and four-year Maryland public higher education institutions.

Participating Institutions: Community College of Baltimore County; Coppin State University; Frederick Community College; Frostburg State University; Garrett College; Hagerstown Community College; Harford Community College; Howard Community College; Montgomery College; Morgan State University; Salisbury University; St. Mary's College of Maryland; Towson University; University of Baltimore; University of Maryland, Baltimore County; University of Maryland, College Park; University of Maryland Eastern Shore; and Wor-Wic Community College

For more information: <http://www.usmd.edu/cai/open-educational-resources>

Badging Essential Skills for Transitions (B.E.S.T.)

Summary: The B.E.S.T. initiative is designed to more clearly communicate graduates' career-ready skills to employers through digital badging. B.E.S.T. focuses on eight essential career-ready skills— Collaboration, Communication, Critical Thinking, Globalism, Interculturalism, Leadership, Problem Solving, and Professionalism— and is a system-wide, scalable approach to career preparation that maximizes the value of curricular and co-curricular opportunities already available to students. Awarded by institutions or organizations, digital badges signify accomplishments such as proficiency in a skill and “make visible and validate learning in both formal and informal settings” ([MacArthur Foundation, n.d.](#)). Because they are digital, badges include access to viewable artifacts that provide evidence of learning to employers and other key audiences. Being digital and openly accessible means these badges can be shared through electronic portfolios, social and professional networks such as Facebook and LinkedIn, or other online venues.

Participating Institutions: Bowie State University; Coppin State University; Frostburg State University; Salisbury University; Towson University; University of Baltimore; University of Maryland, Baltimore County; University of Maryland University College; and Universities at Shady Grove

For more information: <http://www.usmd.edu/cai/usm-digital-badging-initiative>

USMx: Online Learning Initiative

Summary: Since its inception, the Kirwan Center has been supporting USM institutions in making strategic forays into online learning. "Online learning" in this context is defined as any learning environment that makes substantive use of a web-based component that enables collaboration and access to content beyond the classroom. Online learning strategies across the USM, therefore, run the gamut from fully online degree/certificate programs, to MOOCs, to hybrid and "flipped" courses. As part of this work, the Kirwan Center has launched a system-wide online learning strategic planning process to assist USM institutions in developing goals and approaches to online education and tapping new market segments. Additionally, in 2016, USM entered into a groundbreaking partnership with edX, the nonprofit online learning destination founded by Harvard and MIT to increase global access to high-quality education. The agreement is designed to further increase access, affordability, and quality of higher education in Maryland and around the world. The partnership has launched USMx, free online courses offered by the University System of Maryland through the edX platform, and MicroMasters® Programs, free, non-credit master's level courses, which can accelerate the pathway to an advanced degree and save students thousands of dollars in tuition and fees.

Participating Institutions to date: Frostburg State University; Towson University; University of Baltimore; University of Maryland, Baltimore, University of Maryland, College Park; University of Maryland Eastern Shore, University of Maryland University College

For more information: <http://www.usmd.edu/cai/online-learning>

ALT-Placement Project: Investigating Adaptive Learning Tools for Mathematics Placement and Remediation*

Summary: The ALT-Placement Project is piloting the efficacy and feasibility of replacing a high-stakes mathematics placement exam with a process that empowers students to assess and remediate their mathematics knowledge using adaptive learning tools. Adaptive learning tools are computer-based educational systems that dynamically modify the presentation of material in response to student performance—putting the learner at the center of a more personalized learning experience. The project's hypothesis is that these adaptive tools will deliver just-in-time skills remediation while also providing diagnostics that will be a more reliable measure of students' knowledge, thus enabling more accurate mathematics course placements that will increase persistence and lower costs.

Participating Institutions: Baltimore City Community College; Bowie State University; Carroll Community College; Chesapeake Community College; Community College of Baltimore County; Coppin State University; Frostburg State University; Howard Community College; Montgomery College; University of Baltimore; University of Maryland University College; and Wor-Wic Community College

For more information: <http://www.usmd.edu/cai/alt-placement-project>

Adaptive Learning in Statistics (ALiS) project*

Summary: ALiS is focused on developing, piloting, and scaling a credit-bearing, introductory course in college-level statistics that is built on a sophisticated adaptive learning platform from Acrobatiq, a company created at Carnegie Mellon University. The project is investigating whether a flexible learning approach, utilizing standardized learning outcomes, can unify content and improve learning outcomes in gateway mathematics courses without increasing costs, as well as facilitate the transfer of credit between institutions. The course meets the learning outcomes for the introductory statistics course recently adopted by the State of Maryland and has been designed to meet GAISE (Guidelines for Assessment and Instruction in Statistics Education) standards. Additionally, the course has been designed to be a multiple pathway option, as developed by the Dana Center at UT Austin and the Carnegie Foundation for the Advancement of Teaching (CFAT) and endorsed by Transforming Post-Secondary Education in Mathematics (TPSE Math). The project began in 2017.

Participating Institutions: Anne Arundel Community College; Community College of Baltimore County; Frostburg State University; Harford Community College; Montgomery College; Towson University; University of Maryland, Baltimore County; University of Maryland, College Park; and Wor-Wic Community College

For more information: <http://www.usmd.edu/cai/alis-adaptive-learning-statistics-project>

Taking High-Impact Practices (HIPs) to Scale project

Summary: The Kirwan Center staff have assembled a leadership team, made up of representatives from four USM institutions, to help advance system-wide efforts to scale, sustain, and assess High-Impact Practices. The team plans to spend 12 months (Nov. 2017-Oct. 2018) building capacity to track student participation in HIPs, adapt and use emerging quality frameworks associated with HIPs, and assess the individual and cumulative impact of HIPs on student retention/progression/completion and on student learning. This spring, these institutional leaders are forming teams to do an inventory of existing HIPs using a common matrix, which will help determine areas to target capacity building efforts going forward. In undertaking this work, the Kirwan Center staff hope to catalyze a set of lead institutions in advancing their own HIPs efforts while also positioning them to serve as models for other institutions within the System and across the country in scaling, sustaining, and assessing high-quality HIPs.

Participating Institutions: Bowie State University, Coppin State University, Salisbury University, and University of Baltimore

For more information: web page forthcoming

Return on Investment of Academic Innovation project

In spring 2018, members of the Kirwan Center's Academic Transformation Advisory Council (ATAC) embarked on a project to conduct analyses of return on investment (ROI) on academic innovation efforts undertaken around the system. Partnering with the rpk GROUP consulting firm, ATAC members are exploring ways to more effectively capture the impact of academic innovation, especially around ROI; applying an ROI lens in order to build a connection between student success, quality, and financial sustainability and examining how academic innovation contributes to all three; and using ROI data to help communicate about the work happening at each of the institutions and across the system around academic innovation. Results of these pilot analyses will be shared in June 2018 with the aim of creating

a framework for conducting such analyses going forward and the development of a white paper to share lessons learned.

Participating Institutions: Bowie State University; Coppin State University; Frostburg State University; Salisbury University; Towson University; University of Baltimore; University of Maryland, Baltimore; University of Maryland, Baltimore County; University of Maryland Eastern Shore; University of Maryland University College; Universities at Shady Grove; and University System of Maryland at Hagerstown

For more information: web page forthcoming

Ongoing Work

Analytics

Summary: The Kirwan Center is continuing to have conversations with HelioCampus** about ways to effectively roll up data to the system level and run data analytics on key areas of interest related to student success. Additionally, conversations have focused on using insights derived from data analytics to help institutions make better data-informed decisions about resources and priorities. In the next several months, the Kirwan Center will consider whether to continue a system-level agreement with Starfish/Hobsons for their SSMx inventory tool, which is currently being used as part of the Taking HIPs to Scale initiative.

*** HelioCampus combines an extensible data platform with ongoing data science services to leverage enrollment data, student success data, and institutional financial and advancement data to facilitate higher value analyses and spur action, leading to greater institutional performance and financial sustainability. In 2015, the USM Board of Regents approved a plan to spin off the UMUC Office of Analytics into HelioCampus, a private company.*

For more information: <https://www.heliocampus.com>

Assessment

Summary: After the Kirwan Center held a symposium on general education in spring 2016, participants reported a need for support around student learning outcomes assessment. In April 2017, the Kirwan Center organized a system-wide assessment conference. In partnership with the USM Senior Advisor for Graduate Education, the conference focused on outcomes assessment from undergraduate to doctoral education and included assessment within student affairs as well as academic programs. Kirwan Center staff also have begun to talk with USM institutions about the potential value to be had in bridging outcomes assessment efforts and student success data analytics work – two areas that frequently operate in separate spheres. More recently, the Center has entered into an agreement with Portfolium, an ePortfolio platform, to pilot the use of their digital badging functionality. The pilot also will allow USM institutions to test out the use of an ePortfolio combined with rubrics-based assessment, where students can upload digital artifacts and faculty and staff can determine how students in the aggregate are performing in relation to particular learning outcomes. Finally, the Kirwan Center will be partnering with UMBC to host a webinar in fall 2018 on identifying effective assessment technologies, which builds upon a session presented at the spring 2017 conference.

For more information: <https://portfolium.com>

General Education

Summary: Since summer 2017, Kirwan Center staff have been convening General Education program directors from across the system to network, identify common challenges and questions, and explore topics of shared interest. This effort has included polling the directors about where they are in the General Education reform process and offering professional development opportunities in the form of webinars and conference discounts.

For more information: N/A

Leading Academic Change

Summary: Since its inception, the Kirwan Center has convened campus-level leaders of academic innovation efforts from across the system as the Academic Transformation Advisory Council (ATAC). Council members bring a vast knowledge and understanding of the challenges facing their campuses and of the innovative work within their institutions that will address those issues. ATAC members serve a critical role as liaisons and advocates for their institutions and the Center. The Council meets twice a year face to face and monthly by phone to generate ideas, find ways to collaborate, help shape the Center's agenda, advance innovative programs and projects, and disseminate information back to the institutions. The Kirwan Center also draws heavily on this group in the planning and implementation of system-wide summits and conferences. In addition to large-scale events focused on open educational resources, assessment, and general education, the Center has also organized a convening related to gamification of learning, which was co-sponsored by UMUC.

For more information: www.usmd.edu/cai/campus-leadership

SUNY/CUNY/USM OER Collaborative

Summary: In July 2017, representatives from the Kirwan Center joined colleagues representing the SUNY and CUNY Systems to delve more deeply into each System's efforts to take the use of Open Educational Resources (OER) to scale, explore possible points of collaboration, and identify actions and projects that would add value across the three systems. The three systems agreed to focus on short terms projects in the start-up year, including a white paper on sustainability models to maintain and support much more widespread use of OER (initially targeting 20% or more courses employing OER). Overall, five collaboration points have emerged for the group, focused on OER research, quality, accessibility, policy, and sustainability. Going forward, the group plans to solidify the Collaborative by developing a formal statement of purpose and formulating specific projects addressing the five collaboration points.

Participating Institutions: USM, SUNY, and CUNY OER leadership

For more information: The Collaborative will be making a formal announcement about this work in Fall 2018

Teaching and Learning

Summary: With a renewed focus on teaching and learning as part of a summer planning process with the ATAC group, the Kirwan Center is actively exploring funding for a partnership with ACUE (the Association of College and University Educators) to pilot its effective teaching professional development course at 3-4 USM institutions, focused on faculty teaching courses with historically high D/F/W rates.

The Kirwan Center also supports occasional meetings of USM teaching and learning center directors each year.

For more information: <http://acue.org>

Practical Evaluation of Digital Learning (PEDL) project

Summary: The Kirwan Center has partnered with SRI since December 2016 in the development of a toolkit for measuring the effectiveness of educational technology. The PEDL toolkit helps faculty and other users to understand basic types of evidence of effectiveness; choose the most appropriate research design; capture qualitative information about context and implementation; conduct basic quantitative analyses; obtain and interpret data from learning system log files; address IRB permissions and privacy/confidentiality issues; and report research findings for sharing with other higher education faculty and staff as well as for possible publication. SRI has built a prototype evaluation builder that guides the user through the evaluation design process and results in an evaluation plan for the user to implement.

Participating Institutions: A cohort of faculty piloted an early version of PEDL in summer 2017. Now that PEDL is in its prototype phase, the Kirwan Center will be exploring opportunities to further incorporate its use into projects and initiatives.

For more information: N/A

APPENDIX: Listing of institutions involved in Kirwan Center initiatives.

PROJECT	BSU	CSU	FSU	SU	TU	UB	UMB	UMBC	UMCP	UMCES	UMES	UMUC	USG	USM-H	MSU	StMICM	ACM	AACC	BCCC	CCC	CaC	ChC	CSM	CCBC	FCC	GC	HagCC	HafCC	HoCC	MC	PGCC	W-WCC
Adaptive Learning in Statistics (ALiS)			X		X			X	X									X						X				X		X		X
Adaptive Learning Tools (ALT) Placement	X	X	X			X						X							X	X		X							X	X		X
Badging Essential Skills for Transitions (B.E.S.T.)	X	X	X	X	X	X		X				X	X																			
Maryland Open Source Textbook (M.O.S.T.)		X	X	X	X	X		X	X		X				X	X								X	X	X	X	X	X	X		X
Practical Evaluation of Digital Learning (PEDL)		X																														
ROI of Academic Innovation	X	X	X	X	X	X	X	X			X	X	X	X																		
Taking High-Impact Practices (HIPs) to Scale	X	X		X		X																										
USMx: Online Learning			X		X	X	X		X		X	X																				



BOARD OF REGENTS

SUMMARY OF ITEM FOR ACTION,
INFORMATION, OR DISCUSSION

TOPIC: P-20 Overview and Update

COMMITTEE: Education Policy and Student Life

DATE OF COMMITTEE MEETING: Tuesday, May 15, 2018

SUMMARY: The USM Office of P-20 Education and Outreach works to connect *USM 2020 Strategic Plan* goals in the Office of Academic and Student Affairs:

- Equity, Diversity, Inclusion and Civic Engagement: Valuing and Celebrating All Maryland Residents
- Increasing Access, Affordability and Degree Attainment
- From Research to Jobs: Leading in Research, Innovation, and Economic Competitiveness

USM P-20's mission is to "mind the gaps," that is, to facilitate seamless alignments between high school and college, between two-year and four-year institutions, between college and workforce.

This year USM's P-20 work was anchored in the Kirwan Commission context. The Kirwan Commission made preliminary recommendations in five key areas. USM's P-20 work focused on two of the Commission's key areas:

1. Ample Supply of Highly Qualified and Diverse Teachers and School Leaders
 - Teacher Induction, Retention and Advancement (TIRA)
 - Council of the Accreditation of Educator Preparation and Program Approval
2. College and Career Pathways
 - Mathematics Reform: First in the World Grant
 - Governor's P-20 Leadership Council Workforce Development Workgroup
 - B-Power
 - MCCE: Maryland Center for Computing Education

A summary report, with briefing/background materials on each of the five areas, is included and will be discussed with the regents.

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 15, 2018

BOARD ACTION:

DATE:

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

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Highly Qualified and Diverse Teachers and Leaders

Have an Abundant Supply of Highly Qualified and Diverse Teachers

Redesign Schools as Places in which Teachers will be Treated as Professionals, with Incentives and Support to Continuously Improve their Practice and the Performance of their Students

Create a Leadership Development System that Enables School Leaders to Create and Manage High-performance Schools Effectively

Ensure that Students Selected by Maryland Universities for Teacher Training are Comparable in Quality to Those in the Top-performing Countries

In Maryland, as in most other states, there are few policies in place to influence selectivity in the admission of students to teacher preparation programs.

The top-performing countries recruit prospective teachers from the upper academic ranks of the college-bound graduating cohort: the top 50% in Shanghai, 33% in Singapore, 30% in Ontario, and 25% in Finland. In Maryland, as in most other states, there are few policies in place to influence selectivity in the admission of students to teacher preparation programs. For example, while the University of Maryland, College Park Campus (UMCP) and Towson University both require a 3.0 minimum GPA for candidates, the academic record of the high school students going into teacher education at UMCP are among the lowest of those going into any professional preparation program. Alarming, only a handful of students among the thousands graduating from these two universities every year elected to prepare themselves to be teachers: approximately 100 graduates out of more than 7,000 at UMCP and about 200 graduates out of about 4,000 at Towson enrolled with the intent to teach. These policies and the data on students admitted to teacher preparation programs in the State fall far short of the policies typical in the top-performing countries.

It is very hard to get into teacher preparation programs in the top-performing countries. In Finland, it is harder to get into such programs than it is to get into law school. The proportion of acceptances to applicants for places in university teacher education programs in the top-performing jurisdictions range from 1 acceptance for every 10 applicants to a little more than 1 acceptance for every 4 applicants. In addition to presenting a strong academic record, top performers require that successful candidates complete demanding interview and assessment processes assessing zeal for teaching and ability to relate to children, as well as collaborative and interpersonal skills.

Close to 100% of candidates who apply to teacher preparation programs in Maryland higher education institutions are admitted, which is to say that anyone who can get into the university can get into the teacher preparation program, unlike the law school or business, engineering, and architecture programs.

Finally, the top performers are moving in the direction of limiting the right to offer teacher education programs to their research universities. This is not the case in Maryland or the benchmark states.

Because the average achievement of high school graduates is much higher in the top-performing countries than in Maryland, *and* because they are selecting their teachers from a higher segment of high school graduates than Maryland is, these countries are choosing their future teachers from a far better educated pool than Maryland is.

The top performers typically provide strong incentives to attract high school graduates with strong academic records into teaching, including paying the entire cost of attending college and graduate school and, in some cases, providing a salary to the teachers-in-training while in university. The Maryland legislature passed, and the Governor signed into law as Chapter 542, SB 666 in 2014, which sets up an incentive fund for prospective teachers. Maryland residents who have strong academic records (a GPA of at least 3.3, a combined math and reading SAT score of at least 1100, a composite ACT score of at least 25, or 50% on GRE) and pledge to teach in a high-poverty Maryland school for the same number of years for which a recipient received an award, are eligible to receive 100% of tuition, room, board, and fees at a Maryland public institution of higher education, or 50% at a private institution. However, these incentives have not yet been funded by the State.

RECOMMENDATIONS

6. Maryland must work on several fronts to greatly strengthen the pool from which its future teachers come. Specifically, it must:
 - a. Charge universities to greatly expand their recruitment efforts both broadly, to include more students from diverse backgrounds, and in shortage areas, as annually identified by MSDE.
 - b. Mandate that universities improve the quality and rigor of their teacher preparation programs at both the undergraduate and graduate levels and hold them accountable for doing so.
 - c. Direct Maryland's teacher preparation programs to apply for grant funding currently available from multiple major foundations to help schools of education increase the size of the pool of high-ability high school students interested in applying to their programs and help their teachers-in-training to succeed in the more rigorous program of teacher education the institutions will be required to offer.
7. Maryland must provide strong incentives to students with strong records of academic achievement in high school to choose a career in teaching.
 - a. The State should significantly expand the program established under SB 666 of 2014 and ensure it is fully funded in the budget.

- i. The program should be expanded beyond recent high school graduates who are interested in teaching to include students who change their major and graduates who seek to change careers and become teachers.
 - ii. Priority for awards should be given to those who commit to teaching at a high-needs school in Maryland. If additional funds are available then the awards can be made to those who teach at any school.
 - iii. The eligibility requirements of the program should be broad enough to include students who have either a high GPA or SAT/ACT score and a passion and aptitude for teaching.
 - iv. Consideration should be given to requiring a minimum number of years of service regardless of the number of years in which an award was received (*e.g.*, two years).
8. Given Maryland's rapidly changing demographics, the State needs to make special efforts to recruit a more diverse teaching workforce. Currently, only 25% of Maryland's teachers are members of a minority group. The Commission believes that some school children respond better and are inspired by a teacher who "looks like me" and that if a diverse workforce is desired then diverse incentives must be provided.
9. Maryland must require the Maryland Higher Education Commission, MSDE, and the Maryland Longitudinal Data Center to report periodically to the legislature on the high school graduates going into teacher education in Maryland as compared to the quality of high school graduates opting for majors in other professional fields as well as students entering teacher training programs in the top-performing countries.

Ensure that Candidates in Preparation Programs Master the Content they will Teach and How to Teach It

Maryland's regulations for teacher preparation largely resemble those of the benchmark states. Teacher preparation programs in Maryland offer either a bachelor's or a master's degree route into teaching. In the three programs studied – UMCP, Towson University, and Notre Dame of Maryland University – candidates take methods of teaching courses in the subjects they will teach. Prospective secondary school teachers are required to major in the subject they will teach, but candidates teaching in elementary school do not have to specialize in one or two academic disciplines as they often do in the top-performing countries. Programs varied in the extent to which they imparted research skills to prospective teachers: no courses were offered in this arena at Towson, one course in research was required at Notre Dame of Maryland, and three courses in research were offered at UMCP, but only at the master's degree level and these courses were not required.

Programs of study at these institutions in Maryland, consistent across most of the United States' education programs, differ from the top international jurisdictions in several ways. They do not emphasize, or even address, research skills and diagnosis and prescription, which teachers in the top-performing countries use to assess the quality of the research on education, formulate strategies for improving student outcomes

Teacher preparation programs in Maryland do not enable teachers to develop the kind of deep conceptual understanding of the subjects they teach that will be required of their students.

appropriate for the students in their classes, and evaluate the impact of those strategies as they implement them in their schools. They do not require elementary school teachers to specialize in either humanities or math and science, which would by itself be a powerful lever for improving mathematics and science instruction in elementary school and mastery of the STEM subjects in the upper grades. And most importantly, they do not enable teachers to develop the kind of deep conceptual understanding of the subjects they teach that will be required of all students when digital devices take over most of the routine cognitive work that many people now do in their jobs. It is this kind of conceptual understanding that makes it possible for good teachers to grasp the misunderstandings that students typically have when they cannot grasp the material being taught and to correct those misunderstandings. It is also the kind of understanding that is required to prepare students for more advanced work in the upper grades.

One way in which Maryland distinguishes itself from the benchmark U.S. states, and resembles the highest-performing international jurisdictions like Finland, is in its requirement that all teacher candidates must have an internship experience in a designated Professional Development School. In these schools, candidates receive coaching and feedback from staff that have been specially selected and trained. The schools partner with local universities to stay up to date on what teacher candidates are learning. The Professional Development Schools also serve as sites where teachers have career-long access to ongoing professional development and training. All full-time students must have a minimum of 100 days in the Professional Development School, which is approximately the same length, or slightly longer, as the practical experiences in the top-performing international jurisdictions. In the programs we reviewed in Maryland, teachers began their practical experience in their junior year, with observations and small group work, and progressed to full-time student teaching in the senior year.

RECOMMENDATIONS

10. Maryland must use its teacher education program approval authority to ensure that the content of these programs meets international standards of subject matter as well as mastery of the craft of teaching and, further, that the approved programs are aligned with the goals and structure of the public education system in the State. The institutions should be required to offer programs that incorporate the following features of global best practices:
 - a. Instruction practices designed to enable graduates to teach the specific elementary and secondary school standards adopted by the State to students from different racial, ethnic, and economic backgrounds, in such a way as to enable all students to reach the standards established by the State with respect to College and Career Readiness.
 - b. Courses that train teachers to quickly identify students who are beginning to fall behind and just as quickly diagnose the problem and implement solutions to assist the student to catch up.

- c. Training on how to routinely evaluate and use research and data to help teachers improve student performance.
 - d. Provide ample opportunities for students wishing to enter a teacher preparation program to be in classrooms to confirm their interest in and aptitude for teaching early in their college careers.
 - e. The expectation that upper-level students in teacher preparation programs will have significant experience in a high-quality professional development school working under the tutelage of teachers with the rank of Master Teachers in the new career ladder system; such teachers would have a reduced teaching load to enable them to perform this mentoring function well and the opportunity to gain full clinical faculty rank at the sponsoring university.
11. Maryland teacher preparation programs and local school systems must collaborate regularly and develop closer working relationships to strengthen both teacher preparation and ongoing teacher training/professional development programs. MSDE should increase its capacity to provide technical assistance and support to teacher preparation programs and develop a systematic means of providing feedback to programs so as to ensure they are better informed about the content and expectations of the preK-12 classrooms.
 12. MSDE should use its newly granted program approval authority to more rigorously assess teacher preparation programs. Assessments should be based primarily on the success of a program's graduates in the classroom and not on input measures such as the Praxis exam pass rates.
 13. Maryland teacher preparation programs should enable all future teachers to recognize and effectively use high-quality instructional materials (including online) and to adapt existing curriculum to make it stronger using standards-aligned tools to assist them.
 14. Maryland should create a ranking system of commercially available (including online) instructional materials that are aligned with Maryland curriculum standards and of high quality. If a local school system has independently developed a curriculum, a review of that curriculum should be done to ensure it meets these high standards.

Ensure that All Candidates Being Licensed and Hired Meet the Same High Standards

Policy can be used to regulate teacher quality at the point of entry into teacher education or at the point of exit, or both. As we noted above, the top performers put their emphasis on the first of these options, at the front end of the process, by restricting the right to offer teacher education programs to their best universities. Only Shanghai implements a standardized exam measuring whether teachers have mastered the content and skills they learned in teacher preparation when they exit preparation programs. Maryland, like the benchmark states, attempts to compensate for the relatively loose regulation at the front end by controlling teacher quality at the end of the process, with licensure. All states require all teachers to pass an exam of baseline knowledge of content. The exams used in Maryland for this purpose are less rigorous than those employed in Massachusetts and New Jersey. In Maryland, candidates must

The licensure standard in Maryland represents a standard of expectation far below that typically met by prospective teachers in the top-performing countries.

earn passing scores on one of several approved assessments of mastery of core academic content. The cut scores are generally set to a low college admissions standard. Candidates must also pass the relevant Praxis content area tests. In 2015, the average passing rate statewide for all Praxis Core and Praxis content area tests for which data are available was 98.5%. This suggests that the licensure standard in Maryland represents a standard of expectation far below that typically met by prospective teachers in the top-performing countries.

Not only do the top performers set very high standards for the students going into teacher education and for the completion of a program of preparation for teaching, but they do not compromise on those standards by allowing alternative routes that bypass those standards. In contrast, like all the benchmark states, Maryland has created alternative routes that enable candidates in high-need fields to circumvent the usual statutory requirements to be a teacher. Thirteen percent of Maryland program completers came from alternative routes in 2014, higher than 8% in both Massachusetts and New Hampshire, but lower than 38% in New Jersey. While Maryland compares favorably to New Jersey on this indicator of teacher quality, it still has a long way to go to match the top performers.

Furthermore, Maryland, unlike the other benchmarked states, has to recruit a large number of teachers from out of state (61% in 2015). This presents a significant challenge in ensuring the quality of these teachers. Teachers from out of state with a valid out-of-state teaching license and at least three years of teaching experience in good standing are eligible for immediate licensure in Maryland even though they are not familiar with the curriculum, standards, and assessment policies of the State. Those without three years of teaching experience can apply for reciprocity by submitting their transcript and proof of passing scores on Praxis Core and Praxis II subject test to MSDE, a very low standard.

RECOMMENDATIONS

15. Maryland must ensure that all teachers licensed to teach in Maryland, whether they have attended a teacher education program in Maryland or in another state or country, meet standards comparable to the standards met by teachers licensed to teach in the top-performing countries. Specifically, Maryland must:
 - a. Consider, through established agencies and processes for determining licensure standards, adopting for use in Maryland the teacher licensure examinations used in the state of Massachusetts or edTPA, a performance assessment of teaching ability developed at Stanford University.
 - b. Phase in these requirements so that the institutions responsible for preparing teachers in Maryland have time to make sure their students can meet these standards and to make sure that the new incentives intended to attract high-performing high school graduates have time to affect the career decisions of high school students.
 - c. Require teachers from other states to pass the same certification exam as teachers prepared in a Maryland teacher preparation program.

16. Maryland must enhance the current alternative pathway into the teaching profession for career changers. This pathway allows a professional with demonstrated mastery of a certain subject matter and years of experience in the workforce to become a school teacher by “testing out” of the subject matter requirement and taking only a masters level one-year program in the craft of teaching to get a license as a teacher. Such teachers should be assigned an experienced mentor during their first year in the classroom.
17. Because raising standards for licensing new teachers in Maryland might greatly reduce the number of applicants to those programs if teaching does not become a much more attractive career option for high school students with strong academic records, Maryland school districts must raise teacher compensation and improve the conditions under which teachers work.

Seed Grants to Form Collaboratives between Teacher Preparation Programs and School Districts to Begin Implementing These Strategies

RECOMMENDATIONS

18. In order to accomplish the strategies and achieve results, Maryland should create a seed grant program for school districts to partner with teacher preparation programs at Maryland universities. These collaboratives will each be composed of one or more preparation programs and one or more school districts. These entities will work together to create the conditions under which the universities will raise their standards for teacher admission and reform their education and training programs at the same time that the districts are making teaching a more attractive occupation for the high school students the university is trying to attract, including implementing a career ladder and improving working conditions.
19. The structure of the seed grants would be short-term, but multi-year, grants to help the collaboratives build their programs and “show the way” to other school districts and teacher preparation programs in the State as they implement the Commission’s recommendations. Technical assistance must be provided to applicants so that each applicant has an equal chance to put their best proposal forward.
20. An objective awards process should be established with very specific criteria. Grant applicants would be required to present a detailed plan for addressing all of the Commission’s recommendations related to teacher quality, including training all future teachers in basic research and data analysis methods; using formative evaluation, diagnostics, and prescription to identify student difficulties quickly and use appropriate research-based responses; and teaching future teachers how to teach the specific courses in the State curriculum to students from many different backgrounds. Part of the grant application should include how the applicant proposes to achieve greater diversity in the workforce pool.
21. A critical aspect of managing the seed grants is to ensure that each proposal includes a plan to monitor the success of the innovations to be implemented. If the innovation is

producing the desired results, then there would be greater comfort that scaling that program up would lead to success and ensure a high return on investment of funds. It would be optimal that a few ways to implement the Commission's recommendations are explored as one size may not fit all school districts when it comes to scaling up. This will also ensure that each district has control over how best to implement the recommendations for their schools. One of the data points would be the impact on teacher attrition rates.

22. The districts in this grant program should be expected to serve as State pilots for implementing the new leadership development systems, teaching career ladder systems, and advanced forms of school organization and management. Both the universities and the school districts would be expected to work very closely with each other to develop the clinical training schools for new teachers.
23. The university and district partners must take joint responsibility for building on the current Professional Development Schools to create a network of high-quality Professional Development Schools serving very different kinds of students and communities in the State, schools that will implement the emerging career ladder system and use it to manage the new forms of school organization recommended by the Commission.

Career Ladder Systems

The top-performing jurisdictions are increasingly using highly structured career ladders, similar to those found in most high-status professions, to structure the careers of teachers. In Shanghai and Singapore, the world's leaders in this development, as teachers progress up a well-defined sequence of steps, they acquire more responsibility, authority, status, and compensation, much as one would in a large law firm in the United States progress from associate, to junior partner, to senior partner, to managing partner. Or one could compare the careers of school teachers, who typically have the same job on their last day of work as they did on their first day, to those of university faculty, who might progress from lecturer, to assistant professor, to associate professor, to full professor, to full professors who hold endowed chairs. The career ladders for teachers in the top-performing countries can be visualized as a "Y" in which the teacher proceeds from novice up the ladder to an exemplar teacher and then chooses either to proceed on one branch up to master teacher or up the other to principal and beyond. In these systems, master teachers typically make as much as school principals. The criteria for moving up the ladder start with a focus on excellent teaching but then, as they move up, focus on teachers' abilities to mentor other teachers, lead other teachers in the work of teacher teams and, finally, lead other teachers in doing research leading to steady improvement in student performance in the school. In Ontario and Finland, the professional status of teachers and opportunities for differentiated roles creates comparable incentives for retention and professional development. All well-developed career ladders in the leading jurisdictions provide strong incentives to all teachers to get better and better at the work.

All well-developed career ladders in the leading jurisdictions provide strong incentives to all teachers to get better and better at the work.



UNIVERSITY SYSTEM
of MARYLAND

**First in the World Maryland Mathematics Reform Initiative (FITW MMRI)
Project Overview**

Background

The University System of Maryland, in collaboration with the Maryland Community Colleges and the other private and public institutions of higher education in Maryland, are working to address the mathematics “pipeline” issues that have created a significant bottleneck for postsecondary students. The Maryland Mathematics Reform Initiative (MMRI) is a collaborative effort currently underway between the public four-year USM institutions and the two-year community colleges in Maryland to develop and implement multiple high-quality mathematics pathways for students that are relevant for their chosen career path while also ensuring that the new courses have sufficient mathematical integrity and rigor to be deemed “college-level.”

As part of that larger statewide MMRI steering committee work, the USM applied for and was awarded a \$3 million, four-year grant from the U.S. Department of Education’s First in the World (FITW) program to develop, implement, and evaluate a statistics pathway to accelerate developmental students’ progress into credit-bearing postsecondary courses and help more of those students reach certificate or degree completion effectively and efficiently. Project goals include reducing costs for students who will not have to languish in developmental courses and saving the state and higher education institutions at least a portion of the estimated \$72 million spent annually in Maryland on developmental education.

To meet those goals, the FITW MMRI program supported the creation of a new developmental mathematics pathway leading to a general education statistics course or a “Topics for Mathematics Literacy” course. The twelve partnering institutions—five USM institutions and seven community colleges serving approximately 158,000 new students each year—were the “early adopters” of the new mathematics pathway and led the development of the new pathway for all Maryland’s higher education institutions. FITW resources and workshops are open to all public and private higher education institutions in Maryland. We now have all Maryland higher education institutions actively engaged in this important work.

Partner Institutions
Anne Arundel Community College
Cecil College
College of Southern Maryland
Coppin State University
Garrett College
Harford Community College
Howard Community College
Montgomery College
Towson University
University of Baltimore
University of Maryland, Baltimore County
University of Maryland University College

Timeline

- October 2015—Project launched
- December 2015 - August 2016— Pathways course design and development
- March 2016 - September 2016— Advisor training, student recruitment for study
- August/September 2016– Launched pilot MMRI Statistics courses at partner institutions
- September 2017—Pathways courses offered at all partner institutions, enrolled experimental and control cohorts of students
- 2017-2019 - Data collection, analysis and reporting on findings
- 2018-2019 - Dissemination and scaling to other Maryland public institutions

**P-20 Council
Workforce Development Work Group
EPSL May 15, 2018**

The P-20 Workforce Development Work Group, under the leadership of Chancellor Robert Caret, met in 2017-2018 to continue addressing workforce, education, and career training pipeline needs in the state. Two key areas of workforce shortage that were the focus of analysis were the healthcare and cyber industries. USM charged a Presidents' Task Force with examining workforce needs in the healthcare industries – work that is still underway. Multiple initiatives to examine and improve the cyber workforce exist in the state: GWDB convened an IT and Cyber Task Force and the Maryland Department of Commerce released its Maryland Cybersecurity Asset Map, an interactive data source, and finally, Governor Larry Hogan charged a Cybersecurity and Information Technology Task Force to study growth opportunities and produce a report by June 1, 2018.

The Workforce Development Work Group made the following recommendations to the P-20 Council in December 2017:

- DLLR and GWDB should develop a survey for community colleges to gather information on existing apprenticeship pathways, including those that lead to AA and AS degrees, and those that lead to industry certification, and make recommendations for possible efficiencies.
- DLLR and P-20 should identify targets for apprenticeships based on information from survey.
- When the Kirwan Commission recommendations are released, the P-20 Council will assess the impact of the recommendations on the current pipeline to careers and professions and work closely with the Kirwan Commission to ensure the recommendations for CTE and College and Career Readiness reflect evidence-based best practice.
- USM, MICUA, MACC, MSDE and DLLR should review the progress on closing gaps between supply and demand in key industries every two years and make recommendations as to changes warranted.
- USM, MICUA, MACC, MSDE, DLLR and MLDS should analyze the workforce pathways data to determine if any unintended equity issues arise from career pathways policies and recommend approaches to mitigate any found.

**USM Healthcare Workforce Workgroup
P-20 Writing Group**

The USM Healthcare Workforce Workgroup, led by President Jay Perman, charged a P-20 writing group with using the following questions to frame a discussion, identify key issues and

challenges, and propose a short list of recommendations that can be pursued by USM to improve the quality and effectiveness of the System's P-20 partnerships:

1. What do we know about Maryland's current P-20 pipeline efforts? Are they having an impact on the number of students enrolling in health sciences programs? How can we strengthen these pipeline efforts to improve outcomes?
2. Have we adequately developed opportunities for program articulation and institutional collaboration with community colleges? How can USM institutions coordinate more effectively with each other and with the state's community colleges to explore articulation and collaboration opportunities?

The writing group has received data and analysis from members' institutions as well as the MLDS. MLDS in particular has provided a detailed analysis of the education and workforce outcomes of high school health field CTE participants. The writing group is drafting its report (due in June 2018) which will provide an overview of these analyses, present exemplary programs found in the state, identify policy barriers to improving the healthcare workforce, and make policy and funding considerations.



B-Power: USMatters for Baltimore Schools

August 2016: USM Chancellor Robert Caret envisioned a USM partnership with the state's public with Baltimore to improve educational opportunities and outcomes for City students.

- Primary Partners: University of Baltimore (UB) and Coppin State University (CSU).
- Goal: Leverage USM resources to strengthen the pipeline from Baltimore City Public Schools to higher education institutions (2-year and 4-year) and improve career opportunities for City students.

PHASE I / PILOT PROJECT: \$400,000 Initial Investment Yields Results

USM provided UB and CSU with \$400,000 in grant funding to begin improving access, retention, and completion of students from Baltimore City. Elements include:

Coppin State University Initiatives:

- Fall 2018: Will offer free tuition to Baltimore City public high school graduates who obtain an Associate's Degree from Baltimore City Community College (BCCC).
- Expanded partnership with BridgeEdU -- a platform focused on supporting first-generation, low-income, and under-represented minority students.
- Demonstrated success: Coppin retained 55 of 61 at-risk first-year students for a second semester and admitted nearly 40 students who had previously deemed unqualified.

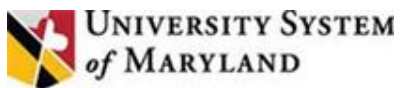
University of Baltimore Initiatives:

- Secured more than \$250,000 in additional private funds to support scholarships.
- Doubled the size of its Summer Academy.
- Initiated the "Bee Line" transfer program for BCCC students interested in attending UB.
- Since 2015, grew by a factor of ten the number of Baltimore City students participating in UB's college readiness or dual enrollment programs.
- Demonstrated success: 65% of UB dual enrollment students went on to college, compared to City average of 43%

PHASE II: Expanding College Readiness & Dual Enrollment Programs

USM will build on Phase I college readiness and dual enrollment program successes to create ecosystem of support for Baltimore Public School Students.

- Immediate Need: \$800,000 to "lock in" programs for next three years.
- Medium-term: Establish B-Power/USMatters as a sustainable, free-standing entity at UB.
- Long-term: Expand B-Power/USMatters to include participation of other Baltimore-based USM and non-system institutions and partners.



Maryland Center for Computing Education (MCCE) at the University System of Maryland

The *MCCE* is designed to expand access to high-quality Pre-Kindergarten-12 (P-12) computing education by strengthening educator skills and increasing the number of computer science teachers in elementary and secondary education. It also serves as a focal point for broader collaborative initiatives to increase the availability and quality of P-12 computing education across the state, including stakeholder meetings and partnerships; teacher certification efforts; standards and curriculum development; innovative pedagogical research and training; training and awareness for administrators, students, and parents; and coordinating with related national efforts.

Building on several national-level computing initiatives (including the White House's CS for All initiative, the NSF-funded Expanding Computing Education Pathways Alliance, and the P-12 Computing Education Framework initiative), the *MCCE* will leverage the *CS Matters in Maryland* partnership between the University of Maryland, Baltimore County (UMBC), the University of Maryland, College Park (UMCP), the University System of Maryland (USM), the Maryland State Department of Education (MSDE), and other stakeholders. Working in collaboration with the progress of national computing education projects and partners, Maryland is well positioned to establish a comprehensive approach to meeting the needs of educators and expanding options for Maryland's future knowledge economy. The centralized infrastructure provided by *MCCE* will increase access, equity, and efficiency of computing education. Although the focus is on supporting Maryland teachers and school systems, there is a strong opportunity to partner with neighboring states and the District of Columbia.

The vision for the *MCCE* is a USM-endorsed initiative that is headquartered at UMBC but connects with other USM campuses, nonprofits, industrial partners, and other government agencies for a strong public-private partnership. As a continuation of the ongoing CS Matters in Maryland and Expanding Computing Education Pathways efforts, our statewide steering committee includes P-12 educators and partners, MSDE members, higher education representatives, business partners, and other key stakeholders. The steering committee has reaffirmed its commitment to its 15-year goals, identified the need for a centralized clearinghouse for continuing efforts, and unanimously recommended the creation of the *MCCE*.

The initial primary focus of the *MCCE* is to increase the number of qualified P-12 teachers who teach computational thinking in STEM courses and a full range of computer science courses, leading to a wide range of postsecondary options in computer science, information technology, and cybersecurity. The *MCCE* will assist local school systems and other partner organizations to increase student exposure to computing and computational thinking by supporting existing teachers, creating a pool of new computer science teachers, and developing educator supports and resources.

Other key goals and activities will include:

- **Collaborative Advocacy.** Providing a focal point for continuing the Maryland CS Education Steering Committee and state-level collaborations to improve standards, curriculum, course availability, teacher preparation, national visibility, and funding support for CS education.
- **Assessing Progress.** Measuring and tracking progress towards the Steering Committee's 15-year goals, leveraging the Maryland Longitudinal Data Center.
- **Increasing Diversity.** Broadening participation by increasing gender, racial, and socioeconomic diversity in computing, as well as increasing accessibility to students with disabilities by providing quality teacher preparation.
- **Creating Quality Content.** Improving P-12 computing curriculum and providing quality teacher preparation.



BOARD OF REGENTS

SUMMARY OF ITEM FOR ACTION,
INFORMATION, OR DISCUSSION

TOPIC: 2018-2019 EPSL Agenda Brainstorming

COMMITTEE: Education Policy and Student Life

DATE OF COMMITTEE MEETING: Tuesday, May 15, 2018

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 15, 2018

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SUBMITTED BY: Joann A. Boughman

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