



BOARD OF REGENTS

SUMMARY OF ITEM FOR ACTION, INFORMATION OR DISCUSSION

TOPIC: University of Maryland, Baltimore: Master of Science in Health Science

COMMITTEE: Education Policy and Student Life

DATE OF COMMITTEE MEETING: June 5, 2013

SUMMARY: The proposed Master of Science in Health Science was developed in response to a request from Anne Arundel Community College (AACC). This was the result of changes in the credential recognized for entry into the Physician Assistant profession, the healthcare needs of Maryland, and health policy changes occurring at the state and national level. Physician Assistants currently assume roles in research, leadership and education in addition to their clinical duties. Currently, clinical practice opportunities have expanded to medical and surgical specialty beyond primary care, with the potential for new opportunities envisioned with health care reform.

In response to expanded medical responsibilities, the Physician Assistant (PA) profession and its representative policy making bodies, the American Academy of Physician Assistants (AAPA) and the Physician Assistant Education Association (PAEA), have endorsed the entry-level master's degree. Concurrently, the Accreditation Review Commission on Education for the Physician Assistant (ARC-PA) has set forth a guideline that all accredited PA programs confer graduate degrees to those students who matriculate into PA programs by 2020. Programs such as the post-baccalaureate certification program offered at AACC, that were accredited prior to 2012 that do not offer a graduate degree, must transition to conferring a graduate degree, which should be awarded by the sponsoring institution by 2020. The proposed Master of Science in Health Science degree at UMB is planned in preparation to meet the requirements for the entry Master's degree, in order to provide consistency and standardization of entry into the profession, reflect the rigors of the PA curriculum, and facilitate inclusion of PA in communities of medical education, research and health policy.

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

FISCAL IMPACT: No additional funding is necessary. The program will be supported through tuition and a one-time, first-year new program allocation.

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

COMMITTEE RECOMMENDATION:

DATE:

BOARD ACTION:

DATE:

SUBMITTED BY: Joann Boughman

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**Maryland Higher Education Commission
Academic Program Proposal**

Proposal for:

- ☒ **New Instructional Program**
- ☐ **Substantial Expansion/Major Modification**
- ☐ **Cooperative Degree Program**
- ☐ **Within Existing Resources**

University of Maryland, Baltimore
Institution Submitting Proposal

Summer 2014
Projected Implementation Date

Master of Science (M.S.) in Health Science
Award to be Offered

Master of Science in Health Science
Title of Proposed Program

Suggested HEGIS Code

51.0912
Suggested CIP Code

University of Maryland, Baltimore Graduate School
Department of Proposed Program

Bruce E. Jarrell, MD, FACS
Name of Department Head

Erin Golembewski, Ph.D.
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President or Designee Approval

5/23/2013

Date



Proposal for Master of Science (M.S.) in Health Science Program

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University of Maryland, Baltimore

**Master of Science in Health Science
MHEC Program Proposal**

May 23, 2013

Section A. Centrality to institutional mission statement and planning priorities

The University of Maryland, Baltimore (UMB) is the state's public academic health and law university devoted to excellence in professional and graduate education, research, public service and patient care. It educates leaders in health care delivery, biomedical science, social services and the law, and carries out internationally recognized research to cure disease and to improve the health, social functioning and treatment of the people it serves. UMB is committed to ensuring that the knowledge it generates provides maximum benefit to society. The mission of the Graduate School is to support, promote and facilitate excellence in graduate education. The Graduate School fulfills this mission in concert with UMB's schools of dentistry, medicine, nursing, pharmacy and social work by development and application of University wide standards and policies for graduate programs, faculty, and students. Currently the graduate school offers 21 Master of Science and Doctor of Philosophy degree programs in health, biomedical, social and population science.

In this time of anticipated healthcare reform, the increased need for primary care providers has been established. Currently, the University of Maryland Medical School has led the state in training future medical specialty and primary care providers. In light of projected shortages of such providers, the intent of this proposal is to combine the expertise of UMB with Anne Arundel Community College's Physician Assistant Program, which shares a mission of excellence in education. The new Master of Science (M.S.) in Health Science degree program to be offered by UMB would build upon the existing post-baccalaureate certificate offered by Anne Arundel Community College (AACC), to improve quality patient care and serve the citizens of Maryland and beyond while maintaining the access, affordability and diversity.

In December 2010, AACC approached UMB about developing a M.S. in Health Science program. This was the result of changes in the credential recognized for entry into the Physician Assistant (PA) profession, the healthcare needs of Maryland, and health policy changes occurring at the state and national level. The program would add value to the education of AACC PA students by elevating their scholarly preparation and their potential for leadership. All students entering the AACC PA and M.S. in Health Science programs will hold B. S. degrees.

The M.S. in Health Science program will be delivered entirely online since AACC PA students will be doing clerkships and clinical work concurrently across the state. Students will access classes via a learner-centered Web portal.

The new degree and collaboration of these two institutions are aligned to the 2004 state plan for Post Secondary Education, the five goals "seen as critical by the Maryland Higher Education Commission are: Quality and Effectiveness, Access and Affordability, Diversity, A Student Centered Learning System and Economic Growth and Vitality."

In recognition of the changing needs in the community and state and requirements of the Physician Assistant (PA) accrediting body, the proposed M.S. in Health Science will enhance the training and elevate the scholarly potential while building on a proven model that presents a solid foundation of medical professional knowledge and skill for the future PA professional.

The educational objectives to be addressed include:

The M.S. in Health Science program's didactic content using existing UMB resources will specifically addresses the following content areas as prescribed by the ARC-PA accreditation standards:

1. Instruction to prepare students to search, interpret and evaluate the medical literature including interpretation of biostatistical methods, access to common medical databases and sampling methods;
2. Instruction in healthcare delivery systems and health policy;
3. Instruction in healthcare system delivery, patient safety, quality and risk management;
4. Instruction of public health as they relate to the role of practicing PAs with regard to prevention of disease, maintenance of public health and participating in disease surveillance, reporting and intervention; and
5. Instruction in the principles and practice of medical ethics.

This non-thesis master's program will incorporate all preparatory course work and provide the summative evaluative method for conferring the graduate credential. Concurrent with UMB's mission and its schools the final product will address a community healthcare need. Student teams will work with a mentor. Teams will identify a healthcare need, frame a research question, perform a literature review, propose and design as necessary an intervention and suggest means for monitoring the effect of the intervention. The finished product will be a public presentation and may be submitted as a grant proposal, or a scholarly publication as appropriate.

B. Adequacy of curriculum design and delivery to related learning outcomes consistent with Regulation .10 of this chapter

Provide a list of courses with title, semester credit hours and course descriptions, along with a description of program requirements. Describe the educational objectives and intended student learning outcomes.

Please see:

Appendix A M.S. in Health Science Program of Study
Appendix B M.S. in Health Science Course Descriptions

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

AACC's Physician Assistant program is accredited by ARC-PA. The ARC-PA has granted Continued Accreditation to the Physician Assistant Program. Continued Accreditation is an accreditation status granted when a program is in compliance with ARC-PA standards. The approximate date for the next comprehensive review of the program will be September 2016.

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

Please see:

Appendix C: Joint Admission and Enrollment Agreement with Anne Arundel Community College

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

The proposed M.S. in Health Science is a direct result of the response to the increasing demands and expectations of graduate PAs in the workplace. PAs currently assume roles in research, leadership and education in addition to their clinical duties. Currently, clinical practice opportunities have expanded to medical and surgical specialty beyond primary care, with the potential for new opportunities envisioned with health care reform. In response to expanded medical responsibilities, the PA Profession and its representative policy making bodies the American Academy of Physician Assistants (AAPA) and the Physician Assistant Education Association (PAEA) have endorsed the entry level master's degree. Concurrently, ARC-PA has set forth a guideline in the most recent iteration of the ARC-PA standards fourth edition released June 2010 that all accredited PA programs confer graduate degrees to those students who matriculate into PA programs by 2020. Programs such as AACC accredited prior to 2013 that do not currently offer a graduate degree must transition to conferring a graduate degree, which should be awarded by the sponsoring institution by 2020.

The proposed M.S. in Health Science degree at UMB is planned in preparation to meet the requirements for the entry Master's Degree, in order to provide consistency and standardization of entry into the profession, reflect the rigors of the PA curriculum and facilitate inclusion of PAs in communities of medical education, research and health policy.

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

Maryland's healthcare system includes prestigious medical institutions, yet it is estimated that within Anne Arundel County certain communities experience health outcome deficiencies. With healthcare reform, an estimated 750,000 individuals will require the services of primary care providers, and the number of needed primary care and specialty providers in Maryland will increase. If the AACC PA program does not create a Master's-granting collaboration, each year approximately 40 fewer healthcare providers will be available to care for the citizens of Maryland.

The United States Bureau of Labor and Statistics has projected that the number of PA jobs will increase by 27% between 2006 -2016 with an overall growth of 10% in the number of PA jobs during that 10-year period. Currently there are more than 2,500 practicing licensed Physician Assistants in Maryland. There are three existing PA programs in Maryland with an average collective graduation rate of 110 per year. The 26-month PA-M.S. in Health Science training model proposed here will significantly help meet the needs of Maryland citizenry.

The table below illustrates the projected growth for primary care occupations in Maryland between calendar year (CY) 2008–2018. The projected growth rate for PAs is 29.1%.

Occupation	Estimated 2008 Employment	Replacement Openings	Growth Openings	Growth Rate
Family and general practitioners	3,040	535	465	15.3%
Internists, general	1,055	185	160	15.2%
Obstetricians and gynecologists	255	45	35	13.7%
Pediatricians, general	540	95	80	14.8%
Physician assistants	2,285	415	665	29.1%
Total	7,175	1,275	1,405	19.5%

E. Reasonableness of program duplication

There are two institutions in Maryland with Master of Health Science programs, however, their foci differ substantially from the University of Maryland, Baltimore's proposed program.

The Johns Hopkins Bloomberg School of Public Health offers a Master in Health Science (MHS) degree. Unlike the proposed program, at Johns Hopkins students engage in study and research in a particular public health discipline in preparation for further graduate work or research careers.

At Towson University, students in the M.S. in Health Science program select one of three specialties, and tailor their program to fit their academic needs and professional goals. The three concentrations offered are:

- Administration - Graduates find work in government, community and school settings.
- Community Health Education - Prepares graduates for community health education careers in the public and private sectors;
- School Health Education - Prepares graduates for positions in health education, including teacher, program supervisor, health education media specialist and program evaluation specialist. Many find positions in continuing education and school personnel departments; and
- Dual concentration - Students take required coursework in any two of the above concentrations of their choosing, thus bridging areas of specialization.

F. Relevance to Historically Black Institutions (HBIs)

Bowie State University, Coppin State University, Morgan State University, and University of Maryland Eastern Shore do not offer a M.S. in Health Science degree.

The University of Maryland Eastern Shore's Physician Assistant Department does offer a Master's Degree in Physician Assistant. Students of the program are prepared to deliver primary health care services to diverse patient populations with acute to chronic medical and surgical conditions in both rural and urban communities and, upon graduation, take the National Certification Examination developed by the National Commission on Certification of Physician Assistants (NCCPA) in conjunction with the National Board of Medical Examiners.

No HBIs in Maryland offer a program that is comparable to the proposed M.S. in Health Science at UMB. Thus, there is no negative impact on HBIs.

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

Through its collaboration with AACC, UMB will design and deliver online courses that will enable students to achieve their academic goals successfully while concurrently pursuing PA clerkships at various sites throughout the state. AACC has implemented comprehensive support systems to support students and faculty who deliver online credit, continuing education, and contract training opportunities.

Recognizing the essential roles that faculty play in all aspects of achieving excellence in online learning, AACC established the Academy of Excellence in the fall of 2008. UMB faculty will have access to the Academy of Excellence, which brings together faculty in multiple disciplines to serve as mentors in order to establish, implement, and maintain an entity to support faculty who develop and deliver e-learning credit courses, continuing education courses, and online training. Fourteen faculty serve as mentors each year; these individuals develop/conduct training, work with faculty to develop e-learning courses, mentor first-time instructors, participate in course peer reviews, and serve as liaisons to the dean, Learning Advancement and the Virtual Campus. A full-time faculty member serves as the coordinator of the Academy of Excellence.

First-time faculty, who are assigned to teach an online or hybrid course, participate in the Academy of Excellence mentoring program. The mission of the program is to draw together two professionals in the spirit of constructive dialogue to exchange ideas about best teaching practices, instructional methodologies, assessment strategies, and general teaching philosophies. At an initial meeting, the mentor and mentee work together to set objectives for the semester, including completing a worksheet that lists their objectives and a description of how they will assess that they have achieved them. At the end of the semester, both mentors and mentees submit summary reports about their mentoring experiences.

Quality Matters (QM) is recognized as a leader in quality assurance for online education and has received national recognition for its peer-based approach and emphasis on continuous improvement in online education and student learning. AACC has implemented the Quality Matters toolset and process to ensure quality in design of online and hybrid courses. AACC is developing these courses based on rigorous, researched-based standards. The standards focus on eight key areas:

Course overview and introduction
 Learning objectives (competencies)
 Assessment and measurement
 Instructional materials
 Learner interaction and engagement
 Course technology
 Learner support
 Accessibility

The Quality Matters standards assure that the online course components of these courses promote learner engagement and provide students with all the tools and information they need to be successful learners.

Twenty-six faculty, in addition to the Academy of Excellence mentors, are certified QM peer reviewers and serve on internal and external peer review teams. To date, 48 courses have received QM recognition as meeting national standards of best practice; 109 courses have been reviewed informally and meet QM's essential standards of best practice. AACC is systematically reviewing all online and hybrid courses to ensure that the courses are well designed.

H. Adequacy of faculty resources

Faculty at the Graduate School are leaders in their respective fields and reside in various departments, centers, and institutes in UMB's School of Medicine, School of Pharmacy, Dental School, Institute for Genome Sciences, and the Institute of Human Virology. The majority of M.S. in Health Science courses will be taught by faculty in the departments of Epidemiology and Public Health.

Below are the names of UMB faculty who will be teaching courses.

Name	Degree	Field	Rank	Courses	Credits
Alexa Mayo	MLS, AHIP	Library Sciences	Associate Director for Services	Introduction to Library Resources and Scholarly Writing	1
Mona Baumgarten	Ph.D	Epidemiology & Biostatistics	Associate Professor	Principles of Epidemiology	3
Clayton H. Brown	Ph.D.	Epidemiology & Public Health	Associate Professor	Principles of Biostatistics	3
Bruce R. DeForge	Ph.D.	Sociology	Associate Professor	Community Based Participatory Research	3

Additional faculty who will be participating in the program are listed below.

Name	Degree	Field	Rank
Sania Amr	MD	Epidemiology & Public Health	Professor
Jessica Brown	PhD	Epidemiology & Public Health	Assistant Professor
Samer El-Kamary	MB BCh, MSc, MPH	Epidemiology & Public Health	Assistant Professor
Nancy Ellish	DrPH, MS	Epidemiology & Public Health	Associate Professor
Olga Goloubeva	PhD, MSc	Epidemiology & Public Health	Associate Professor
Laura Hungerford	DVM, PhD, MPH	Epidemiology & Public Health	Professor
Wendy G. Lane	MD, MPH	Epidemiology & Public Health	Assistant Professor
Laurence Magder	PhD	Epidemiology & Public Health	Professor
Charlene Quinn	PhD, RN	Epidemiology & Public Health	Associate Professor
Mary-Claire Roghmann	M.D., M.S.	Epidemiology & Public Health	Professor
Michelle Shardell	PhD	Epidemiology & Public Health	Assistant Professor
Henry Silverman	MD, MA	Medical Ethics, Research Ethics	Professor
Diane Marie St. George	PhD	Epidemiology & Public Health	Assistant Professor
Michael Terrin	MD, CM, MPH	Epidemiology & Public Health	Professor

AACC PA faculty who would collaborate with UMB faculty for the M.S. in Health Science are qualified by academic credential and experience to teach PA students and graduates at the graduate level.

Below are the names and credentials of AACC administrators who are participating in this collaboration.

Name and credentials	Position	FTE	Faculty Rank
Mary Jo Bondy D. H. Ed., MHS, PA-C	Program Director	1.0	N/A
Shani Fleming, MHS, M.P.H., PA-C	Coordinator of Research	1.0	N/A

Michelle Jiles- Hill MSPAS,PA-C	Academic Coordinator	1.0	N/A
Suzanne Hewes, MS, PA-C	Clinical Coordinator	1.0	N/A
Tim Parker MMS,PA-C	Academic /Clinical Coordinator	1.0	N/A
David Krimins MD	Medical Director	.20	N/A

I. Adequacy of library resources

The University of Maryland, Baltimore's Health Sciences and Humans Services Library (HS/HSL) collection contains more than 30,000 electronic journals, 162 current print journals, approximately 170,000 books, and 6,000 electronic books. Students can access the electronic resources offered on the library web site by logging in with their University ID number. The library serves as the regional medical library for ten southeastern states as part of the national Library of Medicines National network of Libraries of medicine. In addition to the library services and collections, the building also houses the computing services. Faculty librarians are dedicated to providing direct service to students. They use subject expertise to develop online resources and provide in person consultations.

J. Adequacy of physical facilities, infrastructure and instructional equipment

The University has adequate facilities, equipment and infrastructure to support the needs of the new M.S. in Health Science program. Faculty have offices provided within their respective departments and the Graduate School has identified office and work space to house the Administrative Program Director and instructional technology support personnel. The University utilizes and supports Blackboard Learning for online course delivery and Mediasite for lecture capture and video presentations.

Additionally, the instructional technology facilities in the University Health Sciences and Human Services Library will be used for online course development and delivery. Anne Arundel Community College (AACC) under the terms of the Joint Admission and Enrollment Agreement will provide technical and facilities support to the University. AACC has well established and comprehensive technology instructional systems to support students and faculty who deliver online coursework. AACC will assist the University in developing online courses and support systems for M.S. in Health Science students and faculty. These services include:

- Faculty training for teaching and learning in the online environment;
- Instructional design support to build courses in the online learning management system;
- Assisting in the design and building of an online orientation module for M.S. in Health Science students; and
- Provide other technical assistance such as website and shared portal development.

Additionally, the University will utilize AACC testing centers and support systems for offsite M.S. in Health Science student test taking requirements.

As the program develops, it is the intent of the University to establish in-house expertise in online course design and delivery within the Graduate School. As funding becomes available, the personnel and technology resources will be increased to support the online program needs.

K. Adequacy of financial resources with documentation

Please see:

Appendix D	Table 1: Resources
Appendix E	Table 2: Expenditures
Appendix F	Financial Narrative

L. Adequacy of provisions for evaluation of program

The graduates of the collaborative program will be prepared to deliver primary health care services to diverse populations in a competent, ethical and compassionate manner. As a Physician Assistant, they manage patients throughout the life cycle in both community and institutionally based clinical practices. Upon graduation, Physician Assistants take a National Certification Examination developed by the National Commission on Certification of Physician Assistants (NCCPA) in conjunction with the National Board of Medical Examiners through which they earn certification.

Please see:

Appendix G	Graduate Program Review Overview and Purpose
Appendix H	Graduate Program Review Procedures
Appendix I	Graduate Program Self-Study Guidelines

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

UMB is the State's public health, law and human services university devoted to excellence in professional and graduate education, research, patient care, and public service. As a diverse community of outstanding faculty, staff and students, and using state-of-the-art technological support, it educates leaders in health care delivery, biomedical science, global health, social work and the law. It emphasizes interdisciplinary education and research in an atmosphere that explicitly values civility, diversity, collaboration, teamwork and accountability. By conducting internationally recognized research to cure disease and to improve the health, social functioning and just treatment of the people UMB serves, it fosters economic development in the city, state, and nation. UMB is committed to ensuring that the knowledge it generates provides maximum benefit to society and directly enhances our various communities.

Towards that end, UMB's M.S. in Health Science students will interact with and care for diverse populations in under-served urban, suburban and rural areas through AACC PA clerkships.

Additionally, AACC values diversity, and strives to create an inclusive learning environment. Class recruitment and matriculant race and ethnicity report indicates that AACC exceeds the national mean.

N. Relationship to low productivity programs identified by the Commission

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

Not applicable.

Appendix A

M.S. in Health Science Program of Study

AACC Curriculum	UMB Curriculum
<p style="text-align: center;">First Year Summer Term</p> <p>Foundations of PA Practice (PHA 105) - 5 credits Applied Medical Science (PHA 110) - 7 credits AACC credits for term: 12</p>	<p style="text-align: center;">First Year Summer Term</p> <p>Introduction to Library Resources and Scholarly Writing (MHS 600) – 1 credit Social and Behavioral Foundations of Public Health: Theory, Models and Public Health Communication Skills (PH/Prev 610) – 3 credits UM credits for term: 4</p>
<p style="text-align: center;">First Year Fall Term</p> <p>Clinical Medicine 1 (PHA 112) – 8 credits Pediatric Medicine (PHA 114) – 2 credits Psychiatric Medicine (PHA 115) – 3 credits Pathophysiologic Approach to Pharmacotherapeutics (PHA 120) – 3 credits AACC credits for term: 16</p>	<p style="text-align: center;">First Year Fall Term</p> <p>Principles of Epidemiology (PH/Prev 600) – 3 credits UM credits for term: 6 (3 taken + 3 transferred from AACC)</p>
<p style="text-align: center;">First Year Spring Term</p> <p>Clinical Medicine 2 (PHA 118) – 8 credits Pediatric Medicine 2 (PHA 119) – 2 credits Emergency Medicine (PHA 121) – 4 credits Patient Evaluation – 1 credit Pathophysiologic Approach to Pharmacotherapeutics 2 – 3 credits AACC credits for term: 18</p>	<p style="text-align: center;">First Year Spring Term</p> <p>Principles of Biostatistics (PH/Prev 620) – 3 credits UM credits for term: 6 (3 taken + 3 transferred from AACC)</p>

<p align="center">Second Year Summer Term</p> <p>Clerkship Boot Camp (PHA 211) - 1 credit Clerkship 1 (PHA 219) - 4 credits Clerkship 2 (PHA 220) - 4 credits</p> <p>AACC credits for term: 9</p>	<p align="center">Second Year Summer Term</p> <p>Community-Based Participatory Research Methods (Prev 625) – 3 credits Public Health Ethics (PH/Prev 623) – 3 credits</p> <p>UM credits for term: 6</p>
<p align="center">Second Year Fall Term</p> <p>Clerkship 3 (PHA 221) – 4 credits Clerkship 4 (PHA 222) – 4 credits Clerkship 5 (PHA 223) – 4 credits</p> <p>AACC credits for term: 12</p>	<p align="center">Second Year Fall Term</p> <p>Leadership and Communication (MHS 652) – 3 credits Research Seminar (MHS 608) – 3 credits</p> <p>UM credits for term: 6</p>
<p align="center">Second Year Spring Term</p> <p>Issues and Trends (PHA 216) – 3 credits Clerkship 6 (PHA 224) – 4 credits Clerkship 7 (PHA 225) – 4 credits Clerkship 8 (PHA 226) – 4 credits</p> <p>AACC credits for term: 15</p>	<p align="center">Second Year Spring Term</p> <p>Introduction to the Health System and Health Policy Management (PH/PREV 648) - 3 credits Research Seminar (MHS 608) – 3 credits</p> <p>UM credits for term: 6</p>
<p align="center">Third Year Summer Term</p> <p>Final Clerkship (PHA 228) - 4 credits</p> <p>Total AACC credits: 4</p>	<p align="center">Third Year Summer Term</p> <p>Capstone Presentation - 2 credits</p> <p>UM credits for term: 2</p>
<p>Total AACC credits: 86</p>	<p>Total UM credits: 37</p>

Appendix B

M.S. in Health Science Course Descriptions

Introduction to Library Resources and Scholarly Writing (MHS 600)

This course is designed to provide graduate learners the opportunity to develop skills in both accessing relevant online library resources and engage in scholarly writing. The portion of the course focusing on library resources teach and strengthen lifelong research and information competency skills by introducing student to the nature of research and the role of library in the research process. Students learn the core concepts of information retrieval and essential techniques for finding, evaluating, analyzing, organizing, and presenting information. The topics covered include: using online catalogs to locate books and other library resources; developing research strategies; exercising critical thinking to evaluate information; applying critical and search techniques to electronic databases; understanding citation formats and using the internet as a research tool. The scholarly writing portion of the course will place emphasis on organization, effective conveyance of thoughts through written words, and writing for multiple types of audiences. Students will have the opportunity to improve both their academic writing and their research skills as they write a literature review or a proposal. Emphasis is placed on conventions of scholarly writing and organizational strategies as well as grammar, editing, and usage.

Principles of Epidemiology (PH/Prev 600) 3 credits

This introductory course presents a comprehensive overview of the concepts and methods of modern epidemiology. A major emphasis is placed on understanding the strengths and limitations of the various epidemiologic study designs. Bias, confounding, effect modification, and causal inference are covered in detail and the students are given the opportunity to apply these concepts in critiques of the published epidemiologic literature. Learning approaches include lectures, readings, discussions, in-class exercises, and workshops.

Social and Behavioral Foundations of Public Health: Theory, Models and Public Health Communication Skills (PH/PREV 610) 3 credits

This course will examine the complex set of factors that are associated with the health and disease of diverse populations, including the individual, organizational, community, and population. The encourage an appreciation of the wealth of conceptual and methodological approaches and disciplines which inform public health practice and research, course content will highlight the social and behavioral sciences and public health communication. It will go beyond the individual risk factor approach to health and disease, applying multi-disciplinary models and social epidemiology to elucidate the economic, sociocultural, political, and behavioral context and processes underlying health care access and health outcomes. A primary goal is to better understand how, where and why inequities contribute to health disparities, and facilitate an appreciation of the health management process which may reduce inequities in health.

Principles of Biostatistics (PH/Prev 620) 3 credits

This is an introductory course in statistics with coverage of elementary probability and statistical theory, and common statistical procedures used in the biomedical and health sciences. Topics include: elementary probability; random variables; binomial and Poisson distributions; sampling distributions; estimation and significance testing; power analysis; elementary study design; numerical and visual summary; inference for means, proportions, risk ratios and odds ratios; two-group comparisons; two-way tables; Wilcoxon Rank-Sum, McNemar's, and Fisher's Exact tests; correlation and simple linear regression.

Public Health Ethics (PH/Prev 623) 3 credits

The goal of this course is to provide students with both content and skills in the field of the ethics of public health and the concept of health and human rights. This course begins with an introduction to the field of public health and the underlying ethical framework that governs its existence and importance for society. The course next builds upon the theory linking health and human rights together in order to examine in depth the impact of health policies and programs on human rights; the impact of human rights violations on health and the synergistic relationship that flows between the two fields. Flowing from this synergy will be an exploration of power, health disparities, and health inequities and the possible solutions that can bridge the gap between such inequities. In essence, through a uniquely public health approach, this course will examine a spectrum of issues related to health and human rights including health as a human right, measurement and justifiability of the right to health, vulnerable populations and implications for public health practice. Case studies in each of these topics will be utilized throughout the course to support critical inquiry into the burgeoning field of health and human rights.

Community-Based Participatory Research Methods (Prev 625) 3 credits

This course will provide a comprehensive understanding of the ways in which social scientists, health professionals, and community members can collaborate to address public health problems through research that leads to improvements in health and quality of life, and organizational or community change. Students and faculty from multiple scholarly disciplines will examine the approaches to community-based participatory research that go beyond the domain of any one discipline. Students will receive training in the skills and knowledge needed to apply mixed methods (qualitative and quantitative) approaches in designing, implementing, and evaluating public health programs and community-based participatory research. Attention will be given to the scholarly debates and practical/logistical issues in conducting community-based participatory research. Ethical principles of social justice will be applied to public health program planning and evaluation that uses community-based participatory methodology.

Introduction to the Health System and Health Policy Management (PH/PREV 648) 3 credits

Lectures, readings, and discussions are designed to convey an understanding of the U.S. health care system, its history, evolution, structure, function, and effectiveness. The course examines the underlying foundations of health policy and explores the political factors that contribute to its creation. Topics include: municipal, state, national, and foreign organizational systems; health maintenance organizations (HMOs); health care costs; cost containment and quality; regulations; planning and evaluation; data sources; health manpower, and applied problem-solving. This is a 3-credit hour lecture and discussion course, with a graduate-level paper that provides in-depth exposure to a student-selected topic in health policy.

Leadership and Communication (MHS 652, to be developed) 3 credits

Students learn effective management and communication skills through case study-analysis, reading, class discussion and role-playing. The course covers topics such as effective listening, setting expectations, delegation, coaching, performance, evaluations, conflict management, negotiation with senior management and managing with integrity

Research Seminar (MHS 608, to be developed) 3 credits

This is a 3-credit seminar course designed to give students the basic information regarding health sciences research discoveries. It also provides students with the tools to approach translational research in their present and future work. The course covers the core competencies in clinical and translational research, and each session addresses a core thematic area. Students log-in once a week during the semester. Faculty members give a lecture, followed by a student-led presentation. The presentation is followed by a discussion in which all students are evaluated based on participation. Students are given a short essay assignment based on each lecture. The student presentations and short essays count toward the final grade. A research paper also is assigned.

Issues in Healthcare Finance and Service Delivery (PUBL 618, to be developed) 3 credits

The purpose of this course is threefold: (1) to provide an overview of the concepts, principles and practices in healthcare finance and service delivery in the United States; (2) to understand the relationship between public and private-sector finance and service delivery of healthcare; and (3) to examine recent trends in healthcare payment and service delivery, including healthcare reform efforts.

Capstone Project Presentation (2 credits)

The capstone is designed to be a supervised health science learning experience and a demonstration of the substantive application of the knowledge and skills that have been acquired in the courses taken as part of the M.S. in Health Science Program. The capstone functions as both the practice experience and the culminating experience for the program.

The M.S. in Health Science capstone experience includes the following components:

1. development of a capstone proposal
2. delivery of an oral presentation at UMB, and at the field placement site as appropriate
3. preparation of a capstone portfolio

In addition, students will take 6 credits to be transferred in from the PA AACC curriculum, which UMB recognizes as academically rigorous. The reasoning behind the transfer includes; not overloading the students, and the need for 6 credits per semester for graduate level funding. The descriptions to those courses are listed below for your reference. This content area in the design is relevant and consistent across disciplines that would most likely be interested in this degree. Below is information regarding the courses to be taken at AACC.

Pathophysiologic Approach to Pharmacotherapeutics 1 (PHA 120) 3 credits

Course Description: Part one of a two part basic pathophysiological approach to pharmacotherapeutics course, provides the student with an understanding of drug action within the framework of human physiology, biochemistry and pathophysiology. In this course the therapeutic and adverse actions of drugs are understood in the framework of the drugs mechanism of action. Clinical vignettes are used to illustrate pathologic processes that integrate the actions of drugs from the level of an individual molecular target to the level of the human patient.

Delivery Format (and rationale): Hybrid This course is integrated into the scheduling of the clinical medicine course with complimentary content and design. To facilitate student self directed

learning, integrate multimedia learning opportunities and meet instructor schedule needs a hybrid format was created.

Pathophysiologic Approach to Pharmacotherapeutics 2 (PHA 123) 3 credits

Course Description: Part two of a two part basic pathophysiological approach to pharmacotherapeutics course, provides the student with an understanding of drug action within the framework of human physiology, biochemistry and pathophysiology. In this course the therapeutic and adverse actions of drugs are understood in the framework of the drugs mechanism of action. Clinical vignettes are used to illustrate pathologic processes, that integrate the actions of drugs from the level of an individual molecular target to the level of the human patient.

Delivery Format (and rationale): Hybrid This course is integrated into the scheduling of the clinical medicine course with complimentary content and design. To facilitate student self directed learning, integrate multimedia learning opportunities and meet instructor schedule needs a hybrid format was created.

Appendix C

Anne Arundel Community College and University of Maryland Baltimore, Graduate School

Collaborative Physician Assistant Program Joint Admission and Enrollment Agreement

This Joint Admission and Enrollment Agreement ("Agreement") is entered into this 15th day of November 2012, by and between Anne Arundel Community College ("AACC") an accredited, public, two-year institution offering credit programs leading to associate degrees, certificates, and letters of recognition, as established pursuant to Maryland law, and the University of Maryland Baltimore Graduate School ("UM"), an academic unit of the University of Maryland Baltimore, a constituent institution of the University System of Maryland, a public corporation of the State of Maryland.

AACC and UM desire to create a collaborative Physician Assistant Program ("Collaborative Program") sponsored by AACC and subject to review and approval by applicable authorities, including the AACC Board of Trustees, the University System of Maryland Board of Regents, and the Maryland Higher Education Commission. The parties enter this Agreement to clarify their basic understanding regarding various aspects of the Collaborative Program including roles and responsibilities and the status and treatment of students.

The Collaborative Program is designed to prepare students to receive a Physician Assistant Certificate ("PA Certificate") from AACC, and Master of Health Science ("MHS") degree from UM, upon a student's successful completion of the Collaborative Program. It is the intention of the parties that students in good standing who have successfully completed the Collaborative Program and obtained both the PA certificate and MHS degree will have the necessary credentials to be eligible to sit for the National PA Certifying Exam, starting in the 2014 calendar year.

Accordingly, AACC and UM agree to the following:

A. PROGRAM ORGANIZATION AND DEVELOPMENT

AACC will:

1. Certify students as eligible and award the Physician's Assistant post-baccalaureate certificate.
2. Be responsible for the academic and administrative standards and accreditation of the Physician's Assistant certificate requirements.
3. Maintain accreditation for its certificate program from the Accreditation Review Commission for the Education of Physician Assistants.
4. Designate the AACC PA Program Director to be the AACC Collaborative Program Director. This position will be a full-time employee of AACC and will oversee AACC's institutional responsibilities and resources for the Collaborative Program, serve on the Collaborative Program admissions, curriculum and progression committees and the UM MHS program subcommittee at UM.

5. Make available to the Collaborative Program its well-established and comprehensive technology instructional systems to support Collaborative Program students enrolled in AACC and UM online courses and to AACC and UM faculty who create and deliver online coursework.
6. Assist UM in developing online courses and support systems for UM's MHS students and faculty. These services may include:
 - Faculty training for teaching and learning in the online environment;
 - Instructional design support from AACC instructional designers to work with UM faculty to build courses in the selected online learning management system;
 - The design and creation of an online orientation module for UM's MHS students; and
 - Other technical assistance such as a website landing page, the development of a shared portal and templates for marketing and promotional materials.

UM will:

1. Certify students as eligible and award the MHS degree.
2. Be responsible for the academic and administrative standards and accreditation of the MHS degree requirements for the Collaborative Program.
3. Maintain accreditation for its MHS program from Middle States Commission on Higher Education.
4. Designate its MHS program director to be the Collaborative Program Director at UM. This position will be a full-time faculty employee of UM and will oversee UM's institutional responsibilities and resources for the Collaborative Program, serve on the Collaborative Program admissions, curriculum and progression committees and the PA program subcommittee at AACC.
5. Reimburse AACC for AACC's contributions to UM's Collaborative Program technology instructional systems, subject to work plans and budgets mutually approved by the parties set prior to the beginning of each academic year. Work plans may include:
 - Training of faculty for the online environment;
 - instructional design support to build courses in the online learning management system;
 - design and creation of online orientation module for MHS students; and other technical assistance such as website landing page, a shared portal and templates for marketing and promotional materials.

AACC and UM will:

1. Utilize resources from the physical campuses of AACC and UM, online infrastructures, affiliated clinical sites, and other approved resources and sites as agreed to by the parties.
2. Develop mutually acceptable annual budgets and scopes of work prior to the beginning of each academic year. Changes to the annual scopes of work and budgets will require the

prior approval of both institutions. The reimbursement request of a party for work provided must comply with the reimbursing party's financial and administrative policies and procedures including supporting documentation sufficient to confirm that authorized services have been provided.

3. Agree that intellectual property rights to work done under this Agreement will be determined in accordance with the "University System of Maryland Policy on Intellectual Property" a copy of which is available at <http://www.usmd.edu/regents/bylaws/SectionIV/IV320.html>.
4. Agree that each institution's Collaborative Program Director will act as the liaison between AACC and UM. This position will also oversee admissions, registration and student progression at the Program Director's respective institution. Additionally, this position will work closely with the academic leadership and faculty of the Program Director's respective institution on all academic and student affairs issues related to the Collaborative Program.

B. PROGRAM IMPLEMENTATION

1. AACC will organize and conduct student orientation prior to the beginning of the first academic session for each cohort of Collaborative Program students. This orientation will be required for all students. The UM Administrative program director will be assigned by UM to participate in this orientation.
2. AACC and UM Collaborative Program directors and the committees of the parties will conduct on-going self assessment, per accreditation, USM and MHEC guidelines. Collaborative Program faculty at AACC and UM will be responsible for facilitating solicited student performance and evaluation data for each course, as required by the Collaborative Program directors. De-identified evaluation data will be shared between the parties, to be utilized solely in the production of program evaluations.
3. Student records pertaining to matriculation and progression toward the PA Certificate will be maintained by AACC. Student records pertaining to matriculation and progression toward the MHS degree will be maintained by UM. The parties will determine the custody of records pertaining to the collaborative aspects of the Collaborative Program and this information will be shared as appropriate for administrative and compliance purposes.
4. Students will be given notice on the Collaborative Program application form and at student orientation, that student records are subject to sharing between AACC and UM for all legitimate educational purposes of the Collaborative Program.

C. ADMISSION REQUIREMENTS AND PROCESSES

1. AACC and UM will include all information related to Collaborative Program description, application and registration process, descriptions of course offerings, application deadlines, and schedules of classes for all courses on their institution's website, with links to the appropriate resources at each institution's portal.

2. There will be a streamlined application and review process for those who wish to be accepted to the Collaborative Program. All applications will be directed first to AACC for initial processing, then will be shared with UM following procedures established by Collaborative Program committees.
3. Each applicant must meet all AACC and UM admissions requirements to be considered for admission to the Collaborative Program, including all deadlines and documentation requirements.
4. AACC and UM will develop a joint admissions committee to establish screening criteria and engage in the selection of applicants, to include but not be limited to: Total GPA 3.0 or greater, accomplishment of the GRE, TOEFL of 100 or greater, prior BS or BA degree from a regionally accredited post secondary institution or an equivalent foreign institution, accomplishment of all prerequisite courses with performance of 3.0 or better.

D. TUITION, FEES, STUDENT FINANCIAL ASSISTANCE AND SCHOLARSHIPS

1. Tuition and fees will be set by each institution for its own courses and activities. UM will be the home school for all AACC and UM Collaborative Program students for purposes of student financial assistance. All students must be admitted into the Collaborative Program and a student must be registered for all of the specific courses of the cohort to which the student has been admitted.
2. UM office of Student Financial assistance will process and disburse student aid based on the combined registered hours at both AACC and UM for each semester of an academic year. AACC agrees it will not award any loans to its Collaborative Program students.
3. To ensure compliance with federal financial aid regulations, students will receive financial aid from only one institution, UM. If AACC chooses to award scholarships, the amount of the scholarship will be calculated by UM as a reduction to tuition cost. AACC will promptly inform UM of scholarships awarded and UM will account for the scholarship in determining the loan amount each student requires. UM will classify such scholarships as an outside resource. UM's current process will be to send a check to AACC for each student to cover tuition and fees at AACC, by term. Any desired modifications to this process will be discussed and mutually agreed upon between AACC and UM.
4. AACC will be required to submit semester grade reports and scheduled enrollment status updates to UM. The list must include the student's name, ID number, email address and telephone number. Each cohort of Collaborative Program students must be identified separately.
5. AACC will notify the UM office of Student Financial Assistance of all enrollment changes and the receipt of any scholarships and outside resources received by a Collaborative Program student within 5 business days. If a change of enrollment occurs, a student's aid may be adjusted and the student may be billed. Financial assistance will be calculated on the combination of registered hours at both AACC and UM. Refunds will be issued in accordance with the policies of UM and will be issued on the same schedule as those to other UM students.

E. CURRICULUM

1. Overall curriculum design and direction will come from the Collaborative Program curriculum committee. Both AACC and UM Program Directors will be members of the committee and actively participate and advise the committee, including with regard to accreditation standard maintenance and requirements.
2. The Collaborative Program Curriculum Committee will meet on a regular basis and include representative faculty members from AACC and UM to allow full collaboration, input and discussion.
3. Curricular changes initiated by the Curriculum Committee will be sponsored by appropriate individuals at each institution to facilitate courses through the curriculum approval process for each institution.

F. FACULTY

1. AACC's Program Director will determine teaching assignments for AACC courses and UM's Program Director will determine teaching assignments for UM courses.
2. AACC faculty who wish to teach graduate courses at UM must meet all UM criteria for adjunct faculty and be appointed as adjunct faculty at UM, at the discretion of the appropriate administrative officers and in accordance with applicable policy.
3. UM faculty who wish to teach courses at AACC must meet all AACC criteria for adjunct faculty and be appointed as adjunct faculty at AACC, at the discretion of the appropriate administrative officers and in accordance with applicable policy.
4. UM faculty are subject to UM policy regarding dual or secondary employment outside UM prior to accepting an adjunct faculty appointment at AACC or participating in other compensated activities at AACC.

G. STUDENT CONDUCT AND SERVICES

1. AACC will be responsible for providing reasonable accommodation for students with qualifying disabilities who matriculate in AACC course and activities. UM will be responsible for providing reasonable accommodation for students with qualifying disabilities who matriculate in UM courses and activities. When there is a legitimate educational purpose, AACC and UM may share student disability information in confidence with those who have a need to know the information.
2. AACC and UM will be responsible for their own compliance programs and due process applicable to students, faculty and other personnel engaged in activities under the auspices of their respective institutions. This may include, but is not limited to, compliance with applicable laws and policies including Title IX regarding allegations of sexual harassment and sexual violence, Clery Act reporting, child abuse and neglect reporting, whistleblower complaints, academic and scientific misconduct, codes of conduct, workplace safety, equal

opportunity, non-discrimination, privacy, and research regulations including regulations governing human subjects research.

3. AACC and UM will inform students of the policies and procedures of their respective institutions and the obligation to comply with applicable policies and procedures at both institutions.
4. Allegations of misconduct in the Collaborative Program will be referred to the Collaborative Program Director of the applicable campus, who will follow the institution's procedures, including provisions for communicating information and cooperating with the other institution's Collaborative Program Director if appropriate. Remedial or disciplinary action may be coordinated between the institutions if appropriate. A student must be in good standing at both AACC and UM in order to be in good standing in the Collaborative Program.

H. STUDENT ID CARDS, HEALTH INSURANCE, ADVISING, WEB PROMOTION

1. Each student enrolled in good standing in the Collaborative Program will be eligible to obtain a campus identification badge for the AAMC campus and the UM campus, have an AAMC email account and a UM email account, an official record with the Registrar of AAMC and the Registrar of UM, and have a FERPA-compliant directory record in the AAMC and UM systems.
2. Students matriculating on campus at UM must have health insurance coverage and may enroll in the UM student health plan if actively enrolled in courses at UM.
3. Academic advising regarding course work for students will be the responsibility of the faculty assigned to that course. The Collaborative Program Director of the institution will be available to students for professional and program-level advising and Program Directors from both institutions will coordinate their efforts as appropriate.
4. Students in good standing will have to access all AACC student resources and facilities and all UM student resources and facilities including the UM Health Sciences and Human Services library, UM URecFit facilities at the UM campus center, UM Student Counseling Center, UM Student Health Center and the UM shuttle bus service.

I. TERM AND TERMINATION

1. Unless otherwise terminated, this Agreement will run in perpetuity. It may be reviewed and revised at any time by mutual written of AACC and UM.
2. Either party may terminate this Agreement upon 90 days advance written notice to the other party in the event of a material breach by the other party that is not cured within 90 days of written notice.
3. Either party may terminate this Agreement without cause upon 180 days advance written notice to the other party. A decision to terminate the agreement must take into consideration a reasonable plan to teach-out or transfer students currently enrolled in the program, in compliance with Middle States accreditation requirements.

I. PROGRAM ANNUAL REVIEW


1. At the end of each academic year, the parties will discuss the effectiveness of this Agreement and make suggestions as to what mutually agreeable amendments, such as those concerning revenue, cost sharing, and administrative processes, if any, should be made to the Agreement.


K. MISCELLANEOUS


1. AACC and UM will comply with all applicable law and policy regarding equal access and non-discrimination and will not engage in discrimination against any individual on the basis of age, color, disability, national origin, race, religion, sex, sexual orientation, pregnancy, or veteran status.
2. AACC and UM agree to be solely liable for their respective acts and omissions, but, as to UM, only to the extent permitted under the Maryland Tort Claims Act, Section 12-101 et seq., State Government Article, Annotated Code of Maryland, and neither party shall be liable for the acts or omissions of the other party.
3. This Agreement is not intended to create the relationship of agent, servant, employee, partner, joint venture, or association between AACC and UM. Neither party is authorized to take any action or incur any obligation or liability on behalf of the other.
4. The persons signing below on behalf of AACC and UM represent that they are duly authorized and empowered to sign and make this Agreement on behalf of their respective institutions.

READ AND AGREED BY THE PARTIES:

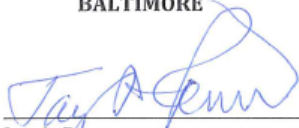
**FOR: ANNE ARUNDEL COMMUNITY
COLLEGE**



Dawn Lindsay
President


Patricia A. Casey-Whiteman
Vice President for Learning


Claire L. Smith
Dean, School of Health Professions, Wellness
And Physical Education

**FOR: UNIVERSITY OF MARYLAND
BALTIMORE**


Jay A. Perman
President


Bruce Jarrell
Senior Vice President and
Chief Academic Officer
University of Maryland Baltimore
Dean, Graduate School

Appendix D

Table 1: Resources

TABLE 1: RESOURCES						
Resource Categories	Year 1	Year 2	Year 3	Year 4	Year 5	
1. Reallocated Funds	\$ -	\$ -	\$ -	\$ -	\$ -	
2. Tuition/Fee Revenue						
(c + g below)						
a. Number of F/T Students	-	-	-	2	2	
b. Annual Tuition/Fee Rate	\$ -	\$ -	\$ -	\$ 11,610	\$ 12,186	
c. Total F/T Revenue (a x b)	\$ -	\$ -	\$ -	\$ 23,220	\$ 24,372	
d. Number of P/T Students	40	80	120	130	130	
e. Credit Hour Rate	\$ 590.00	\$ 607.00	\$ 626.00	\$ 644.00	\$ 677.00	
f. Annual credit hours per P/T student	14	12	10	10	10	
g. Total P/T Revenue	\$ 330,400	\$ 582,720	\$ 751,200	\$ 837,200	\$ 880,100	
(d x e x f)						
3. Grants, Contracts & Other	\$ -	\$ -	\$ -	\$ -	\$ -	
External Sources						
4. Other Sources	\$ 108,000	\$ -	\$ -	0	\$ -	
TOTAL (ADD 1 - 4)	\$ 438,400	\$ 582,720	\$ 751,200	\$ 837,200	\$ 880,100	

Appendix E

Table 2: Expenditures

TABLE 2: EXPENDITURES						
Expenditure Categories	Year 1	Year 2	Year 3	Year 4	Year 5	
1. Faculty (b + c below)	\$ 137,500	\$ 218,750	\$ 227,500	\$ 236,600	\$ 246,064	
a. # FTE	1.00	1.50	1.50	1.50	1.50	
b. Total Salary	\$ 110,000	\$ 175,000	\$ 182,000	\$ 189,280	\$ 196,851	
c. Total Benefits	\$ 27,500	\$ 43,750	\$ 45,500	\$ 47,320	\$ 49,213	
2. Administrative (b + c below)	\$ 240,900	\$ 272,436	\$ 381,936	\$ 401,033	\$ 421,084	
a. # FTE	2.00	2.20	3.00	3.00	3.00	
b. Total Salary	\$ 165,000	\$ 186,600	\$ 261,600	\$ 274,680	\$ 288,414	
c. Total Benefits	\$ 75,900	\$ 85,836	\$ 120,336	\$ 126,353	\$ 132,670	
3. Support Staff (b + c below)	\$ -	\$ 36,500	\$ 37,960	\$ 39,858	\$ 41,851	
a. # FTE	0.00	0.50	0.50	0.50	0.50	
b. Total Salary	\$ -	\$ 25,000	\$ 26,000	\$ 27,300	\$ 28,665	
c. Total Benefits	\$ -	\$ 11,500	\$ 11,960	\$ 12,558	\$ 13,186	
4. Equipment	\$ 10,000	\$ 10,000	\$ 20,000	\$ 20,000	\$ 20,000	
5. Library	\$ -	\$ -	\$ 25,000	\$ 35,000	\$ 50,000	
6. New or Renovated Space	\$ -	\$ -	\$ -	\$ 25,000	\$ 10,000	
7. Other Expenses	\$ 30,000	\$ 25,000	\$ 58,804	\$ 79,709	\$ 91,100	
8. Contingency	\$ 20,000	\$ 20,034	\$ -	\$ -	\$ -	
TOTAL (ADD 1 - 8)	\$ 438,400	\$ 582,720	\$ 751,200	\$ 837,200	\$ 880,100	

Appendix F

Financial Narrative

The source of funding for the M.S. in Health Science program will be tuition and fee revenues generated from AACC Physician Assistant Certificate students enrolled in the program. The proposed cohort of forty (40) students per class will provide sufficient funding after the first year of the program as demonstrated in Appendix E.

The Graduate School will provide onetime bridge funding for the startup year of the program through revenues designated for new program initiatives. Tuition and fees are expected to support the full costs of the program after the first year.

Appendix G

Graduate Program Review Overview and Purpose

The Council of Graduate Schools¹ notes that graduate program review has five general purposes: quality assurance, quality improvement, accountability, identification of strategies for improvement, and provide the institution with information for prioritization of resources. Reviews share certain key characteristics:

1. Program review is evaluative, not just descriptive. It requires academic judgments about the quality of the program and the adequacy of its resources. It goes beyond assessment of minimum standards to subjective evaluations of quality by peers and recognized experts in the discipline or field.
2. Review of graduate programs is forward-looking; it is directed toward improvement of the program, not simply assessment of its current status. It makes specific recommendations for future changes, as part of the long-range plans of the institution, the department, and other coordinating units.
3. Programs being reviewed are scrutinized on the bases of academic strengths and weaknesses, not on their ability to produce funds for the institution or generate development for the state. Finances and organizational issues are relevant, but only as they affect the quality of the academic program.
4. Program review is an objective process. It asks graduate programs to engage in self-studies that assess, as objectively as possible, their own programs. It brings in faculty from other institutions to review the self-studies and to make their own evaluations.
5. Graduate program review is an independent process, distinct from any other review. Data collection and parts of the self-study may often serve a number of review purposes. However, to be effective, graduate program review must be a unique, identifiable process that stands on its own, draws its own set of conclusions, and directs its recommendations to the only individuals with the power to improve graduate programs: the faculty and administrators of the institution.
6. Program review results in action. Based on the reviewers' comments and recommendations, as well as the program faculty's response to the review report, the institution develops and agrees on a plan to implement the desired changes according to a specific timetable.

Incorporating these characteristics, successful graduate program review answers the following questions:

¹ Assessment and Review of Graduate Programs: A Policy Statement. 2005. Washington, DC: Council of Graduate Schools.

Is the program advancing the state of the discipline?

Is its teaching and training of students effective?

Does the program meet the institution's goals?

How is it assessed by experts in the field?

At UMB Graduate Program Review includes an internal self-study and an on-site review by an external site team.

Appendix H

Graduate Program Review Procedures

Periodic review of Graduate Programs is conducted under procedures established by the University System of Maryland (USM) and the Graduate Council. At UMB the review of existing academic programs includes both a self-study (internal review) and an on-site external review. It concludes with a summary follow-up report to USM and Graduate Council.

Schedule – As per USM policy all PhD programs are scheduled for review on a seven year cycle. This schedule is subject to modification due to requirements of prior reviews or other exigencies. Modifications to the program review schedule must be approved by the Office of the Vice Chancellor for Academic Affairs USM.

Program reviews may occur any time during the academic year. It is the responsibility of the Graduate School to notify the Graduate Program Director (GPD) at least six months before a review is due. At that time a tentative schedule will be developed.

Self-studies routinely require about four months to complete. The Dean of the Graduate School should be provided four copies of the final documents at least a month before the scheduled external site visit to distribute to the external site team.

Self-Study – The Graduate Program Director (GPD) is responsible for the internal self-study and the self-study report. (See *Graduate Program Review Self-Study Guidelines* December 2006 for specific direction concerning the self-study.)

Four copies of the complete self-study, including appendices, are due in the Graduate School four weeks before the scheduled review team visit. The Graduate School will forward the self-study to the reviewers. It is the responsibility of the program to provide the Dean of the professional school and other academic and administrative leaders within the School copies of the self-study as appropriate.

External Review Team – Usually external teams will usually be composed of three reviewers. Three-four months before the anticipated visit, the GPD will provide the Graduate School a list of 5-6 potential reviewers, including affiliation and reasons why the individuals will be appropriate reviewers for this program.

The Graduate School will contact reviewers, make all arrangements for travel and hotel, process reimbursement, and receive the team's report.

Cost of the Site Visit – The Graduate School will pay for travel expenses, lodging, and meals according to state per diem. Program or department expenses will not be reimbursed by the Graduate School nor will any entertainment expenses for the team. The program is responsible for costs of preparation of the self-study.

Site Visit – The site visit will usually extend over two days.

It is the Program's responsibility, in consultation with the Graduate School, to construct the site visit itinerary and to provide logistical support, including access to computers, etc. The itinerary must include time with: faculty responsible for the program, including admissions/progression and curriculum; department chair; the school dean or designee; faculty teaching in the program and those responsible for significant research and/or training grants; and students. While some students may be selected to meet with the team, an open time for all students with the team must be available. A tour of program space and core facilities used by the program should be included if there is time.

The Dean of the Graduate School will meet with the team at the beginning of the site visit – usually for breakfast the first morning – and at the conclusion of the site visit to receive and discuss their preliminary report.

External Reviewers Report – The final product from external reviewers is a written report that explicitly identifies program strengths and weaknesses and suggests actions that could improve the program's national ranking. The team will provide the Dean of the Graduate School a written draft of the report, including key observations and recommendations, before they leave campus. It is the responsibility of the Graduate School to distribute the final report to the program, dean of the professional school and other recipients.

Response to the External Reviewers Report – Within three weeks of receiving the report the program prepares a written response addressing reviewers' recommendations and proposing plans for implementation of the recommendations or explanations as to why the recommendations should not be followed. This response is shared with the same individuals/groups who received the report.

Reporting to Board of Regents – A summary of the findings of the self-study, the external team, and the institutional response to the review are provided by the Vice President for Academic Affairs to the Graduate Council Program Review Committee, the USM Vice Chancellor for Academic Affairs, and the Education Policy committee of the USM Board of Regents.

Follow-Up to the Review - Graduate Council has established that programs may be asked for mid-term reports (usually three years following the review) in order to determine progress towards meeting team recommendations.

Appendix I

Graduate Program Self-Study Guidelines

The following are guidelines to assist UMB Graduate Programs in conducting their self-study. The self-study should be presented in three volumes. Volume I, beginning with an executive summary, contains the self-study narrative or the report (See “Elements of the Self-Study” below.). Volume II should contain printed materials describing the program’s guidelines and procedures. Volume III is faculty curricula vitae.

The self-study process is most valuable to the program when all members of the program – junior and senior faculty, graduate students, and administrators - are involved or represented in the self-study. A director of the self-study will be named by the program.

Whether or not they serve on the review committee, graduate students should participate in the program review process. They should be asked to complete confidential questionnaires where feasible, they should be interviewed individually and collectively by the external review committee, and they should have input into the self-study.

The Council of Graduate Schools² describes the self-study, prepared by the faculty of the program as “descriptive, evaluative, and aspirational.” It provides basic information on the program, gives the faculty’s assessment of the program’s strengths and weaknesses, and presents the faculty’s vision for the program’s future.

Elements of the Self-Study. The information described below should be included in each self-study. Wherever possible, data should be provided for at least the previous five years.

- **Program mission and organization:** Purpose of the program, contribution to the school and institution’s mission, and program organization.
- **Relationship to other doctoral programs:** If the program is part of a broader program, describe the relationship and interaction with the broader program.
- **Program purpose:** Intellectual place in the discipline, national need for the program, and the program’s objectives (broad, general goals) and outcomes (specific, measurable results – e.g. faculty expectations for students – that the program seeks to achieve in order to meet its objectives.)
- **Program assessment plan:** Recent assessment of program objectives and outcomes and the use of assessment findings for program improvement.
- **Program size:** Number of graduate faculty, support staff, doctoral students, and degrees awarded.

² Assessment and Review of Graduate Programs: A Policy Statement. 2005. Washington, DC: Council of Graduate Schools,.

- **Faculty profile:** Number and classification of graduate faculty (full/part-time, visiting, tenure/non-tenure track, adjunct); total number of faculty; and procedures by which faculty are selected to affiliate with the graduate program.
- **Faculty research and scholarly activity:** Description of primary areas of faculty research and scholarship and external grants submitted and funded.
- **Student profile:** Admissions criteria; number of applied and admitted students; actual enrollments (pre- and post-candidacy for doctoral students); average standardized test scores and undergraduate grade-point averages of applying, admitted, and enrolled students; citizenship; average age, gender, ethnicity, citizenship, and part-time/full-time status.
- **Student advising:** At what point and how are student's advisors appointed.
- **Financial support for graduate students:** Philosophy of support for students; amount of departmental, program, and institutional funding for students; types of support - stipends, teaching/research assistantships; tuition remission, scholarships, fellowships, and loans; and the selection process.
- **Facilities:** Space (classroom, research, office, student congregate space), laboratory and core facilities resources; library and computer resources.
- **Curriculum:** Degree requirements, program structure, current courses, rotations, frequency of course offerings, and pass rates on preliminary and final oral exams; and how the curriculum reflects the current state of knowledge in the discipline/field.

Include the handbook/checklist distributed to new students. Include a representative curriculum for a student from admission to graduation including milestones, seminars and rotations.

- **Student productivity:** Number of theses and dissertations for the last five years; sample dissertation and thesis quality; student publications, exhibitions, and professional presentations; degree completion rates; and average time to degree.
- **Programmatic climate:** scholarly community, quality of student mentoring, spirit de corps, critical mass of faculty and students, and activities that promote diversity among students and faculty.
- **Profile of graduates:** Number of graduates, job placements, and continued contributions to the field or profession.
- **Future directions:** Plans for new faculty hires, new courses, new facilities, new or expanded research and curricular thrusts, etc.
- **Overall evaluation of program:** Strengths, weaknesses, and national reputation.

In addition to the generic items included above, there may be specific questions, issues, or foci that the GPD, Department Chair, or Dean may want addressed in the self-study and/or by the external review team. Any additional program-specific elements should be identified before the self-study begins.

Appendix J

