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.)

Johns Hopkins University

Institution Submitting Proposal

Spring 2016

Projected Implementation Date

Master of Science	**Health Care Management**
Award to be Offered	Title of Proposed Program

0506-04	**51.0701**
Suggested HEGIS Code	Suggested CIP Code

Carey Business School	**Bernard Ferrari, Dean**
Department of Proposed Program	Name of Department Head

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_____ **11/16/2015**
Signature and Date

President/Chief Executive Approval

11/16/2015
_____
Date

Date Endorsed/Approved by Governing Board

The Johns Hopkins University
Carey Business School
Proposal for Substantial Modification to an Existing Program

Master of Science in Health Care Management

A. Centrality to institutional mission statement and planning priorities

1. Program description and alignment with mission

The Johns Hopkins University Carey Business School is pleased to submit a proposal to substantially modify the existing and previously endorsed <u>Master of Science in Health Care Management</u> program (HEGIS code 050604; CIP code 510701) to offer an online option.

The Master of Science in Health Care Management (MS HCM) is designed to prepare an exceptional core of businesspersons who can lead across a full spectrum of the health care industry. The program is focused on building the knowledge and skills required of successful managers in the health care sector: building efficiencies in delivery of high quality health care; innovation within the health care ecosystem from therapy to delivery; improving the performance of organizations; application of effective decision-making methodologies; and leadership skills to promote inter-professional teamwork.

To continue the Johns Hopkins tradition of excellence, the curriculum emphasizes the strategic, political, cultural and ethical dimensions of health care as well as a practical hands-on application to each student's specific area of interest within the industry. This combination of a broad-based conceptual foundation with exposure to current industry challenges underscores the Carey Business School's mission to develop students into exceptional business leaders who are also exemplary citizens in their communities and societies.

In addition to the face-to-face mode of instruction that is currently available to students, the program will be modified to offer an online option. Students will have a choice among face-to-face courses, online courses, or a combination of both, in a hybrid modality. Students enrolled in the program's online courses will be afforded the same resources and services as students enrolled in the face-to-face courses, including instruction from the same quality faculty.

The mission of the Johns Hopkins University is to educate its students and cultivate their capacity for life-long learning, to foster independent and original research, and to bring the benefits of discovery to the world. The Carey Business School supports business knowledge development and education through our own initiatives, innovations, and collaborative programs across the Johns Hopkins University. We create and share knowledge that shapes business practices while educating business leaders who will grow economies and societies, and are exemplary citizens. The program is fully consistent with both missions.

2. Alignment with institutional strategic goals

Johns Hopkins University has long played a major role in shaping the supply of a variety of health care services and innovations and has exported its expertise and impact around the world. The Carey Business School's MS HCM continues that tradition. The overarching goal of the program is to make students effective and efficient business decision makers. Students trained as future leaders in the health care industry will be prepared to strategically engage in enhancing quality and access at appropriate costs in light of the political, cultural, and ethical context of the relevant health care ecosystem.

The curriculum, which provides a combination of a broad-based conceptual foundation with exposure to current industry challenges, aligns with the Carey Business School's vision to develop students into business leaders who are also exceptional leaders of communities and societies.

The emphasis on strategic, political, cultural and ethical dimensions of health care as well as a practical hands-on application aligns the curriculum with the school's philosophy of teaching business with humanity in mind.

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

1. Program outline and requirements

Program requirements include a minimum of 36 graduate credits. Students will be expected to have a working knowledge of business statistics and basic communication skills either through prior coursework or demonstrated professional experience. Numerous courses will emphasize business communication through appropriate assessments. Students begin the program with a non-credit required boot camp, which introduces them to global health care contexts and challenges.

All students will take the following required coursework components:
- 1 business communications course (2 credits)
- 1 business ethics course (2 credits)
- 7 core courses (14 credits), including a seminar course
- 7 depth courses (14 credits)
- 1 action-based learning course (4 credits)

Students may choose up to 2 general business (non-health care) courses to replace an equivalent number of depth electives (or take them as overloads).

See Appendix A for a complete list of course titles and descriptions.

2. Educational objectives and student learning outcomes

The educational objective of the MS HCM program is to equip graduates with the knowledge and skillset to manage the current and future challenges of the business of health care.

The program will allow students to achieve learning objectives that include:

- Students will learn and apply core concepts and tools in the health care management discipline to develop integrated and innovative strategies to address current and emerging business problems.
- Students will learn, integrate and apply key analytical methods to solve current and emerging business problems.
- Students will learn to assess health care management aspects of local and global business contexts and use this assessment as input to current and emerging business decisions.
- Students will assess their team experience and propose strategies for future improvement.
- Students will be able to explain the role of human values in business leadership.
- Students will be able to develop and justify an action plan to manage an ethical challenge they have identified.
- Students will demonstrate the written communication skills essential in business settings.
- Students will demonstrate effective use of the presentation skills that are essential in business.

3. General education requirements

Not applicable.

4. Specialized accreditation/certification requirements

Not applicable.

5. Contractual agreements with other institutions

Not applicable.

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

1. Demand and need for program

The complexity of the US health care system and the challenges of the business of health care require a highly skilled workforce. The implementation of the Affordable Care Act has introduced new challenges and opportunities in the market. The demographic shift, that is, more baby boomers enrolling in Medicare, emergence of new market places such as federal and state exchanges, paradigm shift from fee-for-service to pay for performance and requirement that providers implement electronic health records have made health care more complex and market oriented than ever before.

Both the Johns Hopkins University and the Carey Business School have academic programs that are recognized nationally and internationally. To continue this tradition of excellence, the curriculum committee comprised of Carey Business School faculty reviewed and redesigned the MS HCM curriculum to ensure that the program produces high quality graduates with skills to address the needs of the complex and ever changing health care industry in Maryland, nationally, and internationally.

As emphasized by Walshe and Smith (2011), "at this time of unparalleled austerity in government and public services, health care systems in many countries now face severe financial constraints as spending is cut but health care demand continues to grow. More than ever, we need effective evidence-based management, visionary leadership, and exceptionally robust and rigorous governance."

Based on a thorough analysis conducted by the Carey's Health Care faculty committee, the following list represents the key challenges in the management of health care:

- Increasing complexity and regulation
- Accelerating industry consolidation
- Lack of managerial skill to optimize productivity
- Significant risk shifting and new metrics of success
- Emergence of "big data" as a potential managerial tool
- Misaligned incentives and competing interests among key participants
- Consumption decisions in the absence of price and cost information
- Increasing global competition for human capital and technology
- Variations in quality and safety
- Escalating costs and uneven access

The MS HCM will utilize a multidisciplinary approach to managing complexity: methods and implications, the role of incentives in efficiency and quality outcomes, the emergence of new organizational structures, value and optimization of the relationship between cost and quality, and improved decision making across the value chain.

2. Alignment with the 2013-2017 Maryland State Plan for Postsecondary Education

The 2013-2017 Maryland State Plan for Postsecondary Education articulates six goals for postsecondary education: 1) quality and effectiveness; 2) access, affordability and completion; 3) diversity; 4) innovation; 5) economic growth and vitality; and 6) data use and distribution. This program addresses five of these goals.

Relative to Goal 1 of the State Plan ("Enhance its array of postsecondary education institutions and programs, which are recognized nationally for academic excellence and more effectively fulfill the evolving educational needs of its students, the state and the nation"), the Carey Business School is committed to developing the MS HCM program, utilizing the school's renowned faculty and collaborators.

In addition to the commitment to excellence and effectiveness, the Carey Business School is committed to ensuring access, affordability and completion, consistent with Goal 2 ("Achieve a system of postsecondary education that advances the educational goals of all by promoting and supporting access, affordability and completion") of the Maryland State Plan, by providing scholarships to help students afford graduate education, using a combination of internal and external sources.

The Carey Business School is committed to the Maryland State Plan Goal 3 ("Ensure equitable opportunity for Academic success and cultural competency Maryland's population") and aspires to have a diverse student body in all programs. Furthermore, through the development of strong and clear student learning outcomes and objectives, the proposed program also aligns with Goal 4 ("Seek to be a national leader in the exploration, development, and implementation of creative and diverse education and training opportunities that will align with State goals, increase student engagement, and improve learning outcomes and completion rate").

Considering the projected demand for well-educated and qualified managers who can manage services and processes in health care organizations, this proposed program is aligned with Goal 5 ("Stimulate economic growth, innovation, and vitality by supporting a knowledge-based economy, especially through increasing education and training and promoting the advancement and commercialization of research").

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

1. Market demand

At some point in life, everyone is impacted by the health care industry, that is, from newborns to senior citizens in assisted living. Health care is among the few sectors that has sustained growth in employment for decades even during the 2008 - 2010 recession. The implementation of the Affordable Care Act and the aging U.S. population are further driving the demand for professional workers in the health care industry. According to the U.S. Bureau of Labor statistics, health care and social assistance sector will account for

almost half of the projected job growth from 2010 – 2020. The health care and social assistance sector is expected to generate more than five million jobs 2012 to 2022.

The U.S. Bureau of Labor statistics report of Baltimore area employment rates from March 2002 to March 2015 (http://www.bls.gov/ro3/cesqbalt.htm) indicated that:

- From March 2014 to March 2015, 10,800 jobs were added in education and health services. This category grew more than any other.
- The national growth average in the education and health services industries is 2.3 percent; however, Baltimore grew at a rate of 4.4 percent.
- "Historically, health care employment has been immune from fluctuations in the business cycle, as shown by the industry's continued growth throughout previous recessions. When the economy got hit with more than 7.5 million job losses…the health care industry stood out as one of a few areas that continued adding jobs, therefore serving as a crutch for the ailing economy."
- Health care, as a whole, added 31,000 jobs in October 2012 alone. This represents 18.1 percent job growth across the country in a single month.

According to the 2012-13 Occupational Outlook Handbook published by the U.S. Bureau of Labor Statistics (http://www.bls.gov/ooh/management/medical-and-health-services-managers.htm), employment for medical and health service managers, who work with medical staff to oversee the delivery of health care, is expected to grow by 22 percent over the next 10 years.

Over the past five years, the Johns Hopkins University and the Carey Business School have been monitoring and tracking the number of inquiries and applicants to the current Carey health care program. Overall inquiries have significantly increased.

Inquiries in 2013-2015 to the programs with focus on health care:

Academic Year	Inquiries for the programs with focus on Health Care	Growth %	Enrolled
2013/14	165	-	9
2014/15	650	294%	20
2015/16	1,426	120%	30

The demand from prospective students to the Carey Business School's academic offerings that have health care-based content, such as a health care concentration, has been increasing. Based on this data, as well as individual and group discussions with current students, we have studied our existing MS program in Health Care Management and have made modality, curriculum and requirement modifications.

2. Educational and training needs in the region

Considering projections for growth in the health care sector, the Carey Business School is anticipating that there will be substantial demand for highly skilled graduates from the MS in Health Care Management program, especially given the focus on improved health care delivery.

The Bureau of Labor Statistics states that 7 of 10 currently existing jobs did not exist in 2004, and 90 percent of new jobs will require some type of post-secondary education or training. The health care sector remains a strong growth sector of the economy, one with a workforce expected to grow by 16 percent by 2018.

The MS in Health Care Management fully prepares students who can establish groundbreaking change in the areas of health care finance, new venture formation, entrepreneurship, and health care management both in the U.S. and globally.

3. Prospective graduates

The MS HCM program is expected to enroll 95 part-time students in the first year, with an enrollment goal of 150 in the second year and increasing after that students per year for the following years. By year three, we expect to graduate the first group of 95 part-time students in this program. By year five, it is expected that 366 part-time students will have completed this program and received their degrees.

Starting in year one, we also plan to enroll 30 students pursuing this program as a full-time option. This number is expected to increase to 50 students per year, over the course of years two through five (the enrollment target goes up by 5 per year). The full-time program is designed to be completed in three semesters (fall, spring, summer) so the incoming full time students will graduate each year.

E. Reasonableness of program duplication

1. Similar programs

There are several institutions in the state of Maryland that offer programs focused on health care. The following examples are the closest examples to the program we propose.

University	Program	Online option
University of Maryland University College	Master of Science in Management: Health Care Administration	Yes
Washington Adventist University	Master of Arts in Health Care Administration	No
University of Maryland College Park	Master of Health Administration	No
Mount St. Mary's University	Master of Health Administration	No
Stevenson University	Master of Science in Healthcare Management	Yes

The Carey Business School program was deliberately designed to be different from the existing programs in the following ways:

    a. Emphasis on data driven and analytical approach to understanding the business of healthcare, that goes beyond the administration of health care facilities;

    b. Focus on the general management of the business of health with specialized courses around the ecosystem of health care including providers (clinics, hospitals, healthcare service companies), payers (public insurance, private insurance, social insurance), innovators (Biotechnology companies, pharmaceutical manufacturers, device makers, software and hardware makers), and stakeholders (regulators, civil service, civil society, advocacy groups, foundations, and funders).

The primary objective of Carey's MS Health Care Management program is to prepare students to assess and act on opportunities, innovate, and improve productivity with the understanding of the healthcare ecosystem and all supporting industries that impact the business of healthcare.

The proposed MS HCM program is designed to provide educational foundation to students regardless of their background grounding in business theory and enable them apply the skills and knowledge honed in class to challenges and opportunities in the full spectrum of the health care services. Both the training and the expected job placement extend well beyond health care delivery. In fact, we believe that a diverse student body, in terms of multi-industry experience, will be strength of the program since a key feature is the between-student learning activities that will take place in the classroom and outside the classroom.

We will strive to increase the diversity of students who have an interest in learning about the business of health care. Many industries serve health care directly (pharmaceuticals and medical devices) or indirectly (information technology), have significant health care costs in their businesses (such as service retail, logistics, and manufacturing) or have targeted it as an adjacent industry for growth (such as financial business and strategy consulting). Our program is designed to meet the needs of these industries and therefore, we expect our students' career paths to fully reflect their interests and backgrounds coupled with the new knowledge they gain at Carey.

2. Program justification

The Johns Hopkins Carey Business School has expanded its collaboration with health care organizations and government agencies during the past several years. In 2012, Carey established a new partnership with the U.S. Department of Health and Human Services (HHS) to further the education of HHS employees by enrolling them as students in academic programs at Carey. The HHS considers this partnership a key to enhancing the professional development and leadership skills of its employees.

The program provides an integrated perspective on the scope, challenges, and tools for addressing health care challenges in today's environment, taking health care into the future and the next wave of advancements.

The program will train managers who can apply the following skills and knowledge that is needed in the health care sector today:

- Acceleration of innovation
- Improving medical and consumer decision making
- Leadership skills to promote inter-professional teamwork
- Application of effective decision making methodologies
- Managerial principles and frameworks that address:
  - o Innovation within the health care ecosystem from therapy to delivery
  - o Effective delivery of high quality health care
- Improvements of the performance of organizations

In addition to management courses, the strong focus on leadership will be presented through courses such as Leadership Ethics Seminars and Leading Health Care Organizations.

F. Relevance to Historically Black Institutions (HBIs)

The Historically Black Institutions in Maryland offer various graduate programs that include MBA and MS programs. Bowie State University offers Master of Business Administration (MBA), MS in Management Information Systems (MSMIS), and Master of Public Administration (MPA) programs. Coppin State College offers Accounting and Management Information Systems, Management and Marketing, and Sport and Entertainment

Management programs. University of Maryland Eastern Shore does not offer a MS in Health Care Management program. Morgan State University offers a Master's of Professional Accountancy (MPA) program. Given the programs offered by the Maryland Historically Black Institutions, we do not foresee any impact from the Carey Business School MS HCM program on these institutions.

G. Evidence of compliance with the Principles of Good Practice

See Appendix C for the evidence that this program complies with the Principles of Good Practice for distance education.

The Higher Education Opportunity Act (HEOA) enacted in 2008 requires that an academic institution that offers distance education opportunities to students 1) has a process established to verify that the student who registers is the same student who participates in and completes the offering and receives academic credit for it, 2) has a process established, to verify that student privacy rights are protected, and 3) has a process established that notifies the student at about any additional costs or charges that are associated with verification of student identity. In this graduate program, the following actions have been taken to satisfy these requirements: 1) students may only enter the academic website for the online courses they take by providing their unique student ID and password they receive when they are admitted to the programs, 2) all FERPA privacy rights are preserved by limiting access very specifically in the University student information system to only those permitted by law to have access to restricted student information, and 3) there are no additional costs assessed to the student for the measures we use to verify student identity.

H. Adequacy of faculty resources

The Carey Business School is fortunate to possess a core of experienced full-time faculty members who are available to teach, advise, or serve on the curriculum committees in the Master of Science in Health Care Management program. Each has earned either a doctoral degree or appropriate Master's training, holds a primary or joint appointment at the Carey Business School, and has considerable experience conducting and disseminating research in his or her area of expertise. Appendix B highlights each core faculty member's expertise related to the MS in Health Care Management. At the time of this writing, it has yet to be determined which specific courses each individual faculty member will teach.

It is our goal to have the program taught almost exclusively by full-time faculty, many of whom are on the tenure (research) track. Our faculty is well known national experts in their areas of expertise. More than half the faculty at Carey has research projects in health care and those who are or will teach in Carey's health care related programs have ongoing programs of research in health care (Aron, Chambers, Dada, Frick, Gordon, Gunia, Lee, Macis, Phan, Sutcliffe, Robeson, Thompson). Many of our faculty have extensive experience in the health care and related industries and are national thought leaders (Aron, Dada, Ferrari, Frick, Gordon, Phan, Sutcliffe). We have and will continue to recruit full time faculty with research and/or practical experience in health care this academic year and in the future.

I. Adequacy of library resources

The Milton S. Eisenhower Library on the Homewood campus is ranked as one of the nation's foremost facilities for research and scholarship. Its collection of over three million bound volumes, several million microfilms, and over 13,000 journal subscriptions has been assembled to support the academic efforts of the University. The interlibrary loan department makes the research collection of the nation available to faculty and students. The library also provides easy access to a wide selection of electronic information resources, including the library's online catalog, and numerous electronic abstracting and indexing tools. Many of the databases are accessible remotely. The library offers a variety of instructional services, including electronic classrooms designed to explain the library resources available for research and scholarship. Librarians help students electronically and the library maintains an extensive web site to take visitors through all of its services and materials.

J. Adequacy of physical facilities, infrastructure and instructional equipment

The proposed Master of Science in Health Care Management online option will not impact the Carey Business School's physical facilities and infrastructure.

K. Adequacy of financial resources with documentation

Details concerning the resources and expenses may be found in Appendix D.

L. Adequacy of provisions for evaluation of program

On a day-to-day level, the program will be overseen by a combination of the Vice Dean for Education, the Associate Dean for Admissions and Academic Programs, the Associate Dean for Student Development (who specifically oversees academic advisers), the Registrar and a faculty Academic Program Director who together will be responsible for managing the program plans, monitoring students' progress in programs and ensuring that the students are in good academic standing according to the school's policies, as well as managing course offerings, conducting program evaluations, and working with the Curriculum Committee. The School's curriculum committee will be responsible for revision of the curriculum and recommendations for the required modifications with the course offerings and evaluation of the faculty expertise required for these course offerings, and evaluating how students achieve the desired learning outcomes. In addition to the administrative structure mentioned above, the office of Teaching & Learning@Carey manages the course evaluation process and provides instructional design that is useful in assuring the quality of all academic courses and programs and will be integral to the design of a coordinated and coherent set of courses and pedagogical approaches for the new MS HCM program.

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

The Johns Hopkins University follows all stipulations of Title VI, Title IX, and Section 504. Accordingly, race is not considered in the administration of the school's educational programs. Nonetheless, in accordance with Johns Hopkins University's stated commitment to

diversity, we believe educators should use aggressive and innovative recruitment and support processes to increase and sustain diversity. To that end, the following focused recruitment activities will be employed: (1) Involvement of students from culturally and linguistically diverse (CLD) backgrounds in the planning and delivery of information sessions and recruitment information; (2) Success stories about previous CLD graduates as part of the recruitment literature; (3) Focused information meetings that emphasize that the school provide mentoring opportunities and a range of student activities including student clubs that encourage participation of students from different cultural, academic and professional backgrounds.

N. Relationship to low productivity programs identified by the Commission

Not applicable.

Appendix A

Course List and Descriptions

Curriculum (36 credits)

Business Communications (2 credits)
This course refines student's skills in written and oral communication to internal and external audiences. Through analyses and practice of communication strategies adopted by successful business professionals, students learn to write clearly and concisely, make compelling oral presentations, and construct effective arguments.

Business Leadership and Human Values (2 credits)
This course explores ethical leadership as a framework for enterprise value creation in a complex environment of competing economic and moral claims. Students examine the intrinsic ethical challenges of leadership and the concept of a moral compass as a foundation for responding effectively to the ethical challenges of corporate citizenship and value creation in a competitive global economy.

Health Care Core

Overview Bootcamp (non-credit online)
This case-based course provides an overview of the strategic and policy challenges of delivering health care around the world, summarizing the philosophy, pedagogical approaches, and courses in the program. Over a two-week introductory period, discussions will focus on the 4 Managerial Skills (Sense Making, Problem Solving, Sense Giving, and Global Mindset) and 4 Strategic Pillars (Quality, Access, Cost, and Innovation) that leaders in the industry require to achieve the triple aim of high quality, efficiency, and optimal health outcomes.

Health Care Systems around the World (2 credits)
This course provides a detailed overview of the health care system's segments and stakeholders, analyzes the industry's evolution, and addresses likely near-term changes domestically and globally. It includes global aspects of health care management having to do with differences and similarities in beliefs about patient rights, aging, disease management, and public expenditures on health.

Frameworks for Analyzing Health Care Markets (2 credits)
This course provides students the economic/productivity language, along with other considerations (such as ethics and distributional issues), to discuss system change and challenges faced by product manufacturers, insurers, health care providers, and patients. Lectures and cases explore the drivers of costs, prices, access to health care services, and innovation.

Health Care Law and Regulation (2 credits)
This is a course on health care law with specific references to U.S. regulation and the changing aspects of regulation. The U.S. approach is then set in contrast to European and Asian health care regulations.

Providers and Payers (2 credits)
This course focuses on organizational innovation, specifically strategies and tactics for provider networks and payers to manage resource constraints as well as insurance and reimbursement issues in order to deliver quality, ethical, and efficient care. Interactions between providers and payers are a critical topic, along with how these interactions lead to innovations, discontinuities in health provision, and policy change.

Health Care Marketing and Access (2 credits)
This course focuses on the specifics of the marketing mix in health care. The main topics covered include pricing, distribution and communications to patients, providers, and external stakeholders, such as regulators and non-governmental organizations. The role of marketing to encourage access, pricing as part of decisions on access, particularly in Bottom of the Pyramid markets, and the role of marketing communication to foster community health are discussed.

Health Care Innovation and Evaluation (2 credits)
This course focuses on emerging models of health care provision, including the role of information technology, mobile technologies, point of care diagnostics on a chip, health care at home, telemedicine, and technology mediated innovations in health care for both consumers and providers. The course discusses various models of evaluation and how health care innovation is valued, funded, and commercialized.

Research and Policy Seminars in Health Care (2 credits)
These seminars, conducted by industry experts and faculty from the Carey Business School, School of Medicine (therapies and diagnostics), School of Public Health (public health policy and epidemiology), School of Nursing (community health), School of Engineering (devices), School for Advanced International Studies (international development and health), School of Arts and Sciences (social determinants of health) focus on current issues, cutting edge research, and discourse. One of the deliverables will be an integrative paper with a personal development plan discussing how they will keep abreast of the field and an articulation of their growth as leaders.

Health Care Depth

Health Care Operations and Quality Improvement (2 credits)
This course focuses on in and outpatient health care operations with an emphasis on organizational design, fostering and managing inter-professional relationships, and national and regional cultural aspects in health service practices. Introduction is made to quality improvement, patient safety, and patient centered health service processes. Additionally, foundational elements of patient safety and quality improvement research are presented. This will include a discussion of what is considered human subjects research and how this issue facilitates or limits opportunities for dissemination.

Emerging Frontiers in Health Care Technology and Strategy (2 credits)
This course explores the impact of information technology on mHealth and eHealth to disintermediate providers and patients. It explores the implications for payment systems,

innovation, conceptualizations of who provides health care, community health, and health care and wellbeing at home. The role of information technology in empowering patients with the responsibility for their own health is discussed, along with the implications for changes to organizational and provider networks in adapting and exploiting emerging information technologies to reduce costs and improve quality and access to information.

Medical Devices and Diagnostics (2 credits)
This course explores the market model for medical products, services, and technologies, as well as an assessment of market needs in the context of changing global demographics. The course discusses the barriers and triggers for innovation with reference to the role of culture, regulation, efficiency, and appropriate pricing. Innovations that support Bottom-of-the-Pyramid markets (e.g., Jaipur Foot, $1k handheld ultrasound, $100 mechanical ventilator) are explored.

Biotechnology and Pharmaceuticals (2 credits)
Based on an overview of scientific, clinical, legal, financial, strategic and ethical perspectives, this course focuses on new developments in the biotechnology and pharmaceutical industries. Topics covered include patent law, the need for nimbleness in regulatory bodies, and traditional and non-traditional sources of funding to spur innovation. It explores fast evolving market models for innovation in pharmaceutical and bioengineering, as well as radiological and non-radiological therapies in the context of changing global demographics and population health crises (aging, chronic non-infectious diseases, pandemic infections, psychiatric disorders, maternal health).

Health Care Financing and Financial Management (2 credits)
This course cover financial and business models of various providers (in-patient, ambulatory, assisted living, etc.). The course discusses how the interactions between the sources of financial risks faced by payers and suppliers (drugs, devices, information technology) and the sources of risks faced by providers impact quality and productive delivery of service.

High Reliability Health Care Organizations (2 credits)
This course focuses on organization design, teaming, risk management, sense making, and sense giving, discussing the special role of unit leaders in ensuring high reliability with discussions centered on the latest research in high reliability organizations. It pays special attention to the emotional and affective dimensions of decision-making and communications with reference to the high-risk elements of provider organizations such as Intensive Care Units, Surgical Units, Emergency Departments, and high-risk stages in their operations such as during transitions of care.

Delivering Wellness to Communities (2 credits)
This course covers, among other topics, the social determinants of population health and more generally community wellness including aspects of education and economic opportunity. It discusses the role of nutrition, supply chain in urban areas, public safety, and education as determinants of communal wellbeing, with a clear recognition of how different cultures define this term.

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Required Action-Based Learning Course (Choose 1)

Health Policy Design and Implementation (4 credits)
Students travel to Washington, D.C., and Annapolis, MD, to visit federal and state institutions, advocacy groups, and non-governmental organizations that are critical to the development of health policy, technology and the delivery of health care services. Students write a significant scholarly paper, with the appropriate literature reviews, to address a critical policy debate, using the frameworks and perspectives from their core courses and the seminar series.

Client Consulting Practicum (4 credits)
Students enhance their business education by developing collaborative consulting engagements with businesses and nonprofit organizations in which students assist their client organizations in addressing existing and emerging challenges in the health care space. These clients may be domestic or international.

Health Services Improvement Project (4 credits)
Students work with clinical clients in the Baltimore/Washington DC area to measurably improve the costs and quality aspects of their organization.

Commercializing Biomedical Innovations (4 credits)
Students work with inventors to determine the commercial potential of their ideas. Students learn how to search and evaluate patents, conduct a patent landscape, conduct market research and a preliminary regulatory analysis for biomedical inventions, and make recommendations on the disposition of the invention (abandon, license, spinout or startup).

Business Electives ((non-Health Care) students may choose up to 2 to replace the depth courses)

Managerial Depth

Negotiation (2 credits)
This course provides students with the foundation skills needed for effective negotiation. The interactive and independent learning opportunities provided during the course are designed to help participants understand and develop a systematic approach to preparing for, structuring, and engaging in business negotiations using two core approaches. Participants will develop communication, process, and conflict handling skills needed for effective negotiation of relationships. Participants will engage in live and electronic negotiations to build their skills in employing or overcoming specific negotiation strategies and tactics. The course content includes learning opportunities designed to sharpen participants' ability to analyze negotiations from both an ethical and cultural perspective, and develop approaches that facilitate cross-cultural understanding and ethical negotiation.

Creative Leadership (2 credits)
This course explores approaches to deal with business problems that are too ambiguous, complex, or messy or impossible to be addressed directly through logical strategies. It seeks to increase the participants' understanding of creativity, to improve creative problem-solving skills and to enhance the ability to promote these skills in others. Students participate in activities designed to help develop their own creativity, and discuss the creative process from various theoretical perspectives.

Strategic Management (2 credits)
This course is concerned with the formulation and analysis of business strategy. Business strategy is the set of objectives and policies that collectively determine how a business creates economic value for its owners and stakeholders. Strategy is concerned with answering two central questions: "What businesses should we participate in?" and "How should we compete?" Students will learn analytical techniques for diagnosing the competitive position of a business, evaluating business strategies, and identifying and analyzing specific business options.

Consumer Behavior (2 credits)
This course provides students with a solid foundation in consumers' decision making based on based on theoretical and empirical findings from the field of psychology, anthropology and sociology. Topics include consumers' knowledge and involvement, attention, comprehension, learning, attitude, and purchase intention. Strong emphasis is given to the design and modeling of response patterns, diffusion of innovations, and consumer behavior for specific products and services. Also explored is the practical impact of consumer behavior analysis on marketing mix strategies, market segmentation/positioning, brand loyalty, persuasion process and promotion.

Entrepreneurial Ventures (2 credits)
This course focuses on the knowledge, skills, and attitudes that enable entrepreneurs to pursue opportunities in business development. Students form teams to experience each step of the entrepreneurial process. The end result is an opportunity assessment of a business idea. Emphasis is placed on a hands-on approach with learning supplemented by cases appropriate to each phase of the course. Entrepreneurs and subject experts expose students to real entrepreneurial operations and businesses, such as incubator and venture capital firms, via consultations and presentations.

Analytical Depth

Competitive Pricing Analysis (2 credits)
Pricing is one of the most important and least-understood marketing decisions. This course aims to equip students with proven concepts, techniques, and frameworks for assessing and formulating pricing strategies. The objective is to prepare students for addressing strategic and tactical pricing issues and identifying profit-boosting changes in pricing practices across a range of professional contexts – as product/service managers, business unit managers, management consultants, entrepreneurs and M&A advisors.

Accounting and Financial Reporting (2 credits)
This course emphasizes the vocabulary, methods, and processes by which business transactions are communicated. Topics include the accounting cycle; basic business transactions involving assets, liabilities, equity, account revenue, and expense; as well as preparation and understanding of financial statements, including balance sheets, statements of income, and cash flows.

Corporate Finance (2 credits)
About 90% of total revenues in the US economy are generated by corporations. Understanding decision-making within a corporation, whether it is about the choice of investment or about how to raise capital to finance a specific investment, is fundamentally important to understand the key players in today's economy. This course provides the tools to understand efficient decision-making within a corporation by employing the notion of absence of arbitrage (i.e., the Law of One Price), namely the fundamental principle shaping all aspects of modern finance.

Decision Models (2 credits)
This course discusses quantitative methods that have proven to be particularly useful for decision making in business settings. The course covers a variety of models and methodologies. While a number of software programs are available, the course will leverage the capabilities of Excel for a large number of topics. An emphasis will be placed on formulating problems, translating those formulations into useful models, optimizing and/or displaying the models, and interpreting results. The lessons of this course prepare students to perform the analysis required in subsequent courses and in practice. Topics such as Linear and Integer Linear Programming, Network Flow, Decision Analysis, and Monte Carlo Simulation will be discussed to demonstrate applications in planning and control for different types of business decisions.

Data Analytics (2 credits)
This course prepares students to gather, describe, and analyze data, using advanced statistical tools to support operations, risk management, and response to disruptions. Analysis is done targeting economic and financial decisions in complex systems that involve multiple partners. Topics include: probability, statistics, hypothesis testing, experimentation, and forecasting.

Appendix B

Faculty

Federico Bandi, PhD (Yale University), Professor – Full time, teaching interests are: Finance Theory and Derivatives

Josie Moore, MA (University of Maryland), Lecturer – Full time, teaching interests are: Communication, Leadership and Management

Arnab Bisi, PhD (Hong Kong University of Science & Technology), Assistant Professor - Full time, teaching interests are: Operations Management, Supply Chain Management, Business Analytics, and Management Science

Chester Chambers, PhD (Duke University), Assistant Professor - Full time, teaching interests are: Strategic Options and Simulations, Emerging Issues & Simulation, and Management of Medical Services

Maqbool Dada, PhD (Massachusetts Institute of Technology), Professor - Full time, teaching interests are: Operations Strategy, Management of Service Operations, and International Operations Management

Kevin Frick, PhD (University of Michigan), Professor & Vice Dean for Education - Full time, teaching interests are: Health Care Financing and Economics of Health Care

Shweta Gaonkar, PhD (University of Maryland), Assistant Professor - Full time, teaching interests are: Entrepreneurship and Business Policy and Strategy

Ricard Gil, PhD (University of Chicago), Associate Professor - Full time, teaching interests are: Organizational Economics

Toby Gordon, ScD (Johns Hopkins University), Associate Professor - Full time, teaching interests are: Commercializing Scientific Discoveries and Strategy in Health Care Organizations

Changmi Jung, PhD (Carnegie Mellon University), Assistant Professor - Full time, teaching interests are: Health Care Information Systems and Digital Innovations in Health Care

Hyeong-Min Kim, PhD (University of Michigan), Assistant Professor - Full time, teaching interests are: Marketing Management and Marketing Strategy

Sharon Kim, PhD (Cornell University), Assistant Professor - Full time, teaching interests are: Organizational Behavior and Managing Creativity in Organizations

Stacey Lee, JD (University of Maryland), Assistant Professor - Full time, teaching interests are: Business Law, Negotiations, and Legal Foundations of Health Care

Sanghee Lim, PhD (University of Michigan), Assistant Professor - Full time, teaching interests are: Health Information Technology

Nayoung Louie, PhD (Johns Hopkins University), Lecturer - Full time, teaching interests are: Statistics and Discovery to Market

Supriya Munshaw, PhD (Duke University), Lecturer - Full time, teaching interests are: Technology Transfer, Commercialization of early-stage technologies, Health Care and Pharmaceutical Strategy

Jian Ni, PhD (Carnegie Mellon University), Assistant Professor - Full time, teaching interests are: Pricing Strategy, Industrial Organization, and Health Care

Phillip Phan, PhD (University of Washington), Professor - Full time, teaching interests are: Strategic Management and Technology Entrepreneurship

Bonnie Robeson, PhD (West Virginia University), Senior Lecturer - Full time, teaching interests are: Statistics for Business, Quantitative Analysis for Decision Making, and Business Side of Life Science

Emilia Simeonova, PhD (Columbia University), Assistant Professor - Full time, teaching interests are: Health Economics, Children's Health, and Development Economics

Xian Sun, PhD (Rensselaer Polytechnic Institute), Assistant Professor - Full time, teaching interests are: Corporate Finance and Financial Institutions

Kathleen Sutcliffe, PhD (University of Texas), Professor - Full time, teaching interests are: Business Communications

Lindsay Thompson, PhD (Johns Hopkins University), Associate Professor - Full time, teaching interests are: Leadership Ethics and Human Values, Corporate Governance and Social Responsibility, Globalization and Human Flourishing

Dalton Tong, MBA (University of Baltimore), Senior Lecturer- Full time, teaching interests are: Accounting and Financial Reporting

Appendix C

Evidence of Compliance with the Principles of Good Practice
(as outlined in COMAR 13B.02.03.22C)

(a) Curriculum and Instruction

(i) A distance education program shall be established and overseen by qualified faculty.

The online option of the MS HCM program proposed here has been developed by the Johns Hopkins Carey Business School Vice Dean for Education and the Academic Program Director in consultation with colleagues at the Johns Hopkins Carey Business School.

Vice Dean and Professor Kevin Frick taught online programs for nearly a decade at the Johns Hopkins Bloomberg School of Public Health prior to joining the Carey Business School faculty and administration. He is involved in the development of the school's online courses and works closely with the head instructional designer who leads the Teaching & Learning@Carey office within the Carey Office of Educaiton that supports faculty professional development for pedagogy and learning assessment activities.

Toby Gordon, Academic Program Director, is an Associate Professor with expertise in the areas of health care policy, management of hospitals and health systems, and technology commercialization. Toby Gordon will handle all tasks that deal directly with students. In concert with Toby Gordon, Phil Phan, Professor, has been and will continue to be actively involved in curriculum development and recruiting appropriate faculty to teach the courses.

The online courses taught in the MS HCM program will continue to be offered in the face-to-face format by the same pool of faculty.

(ii) A program's curriculum shall be coherent, cohesive, and comparable in academic rigor to programs offered in traditional instructional formats.

The courses that would be offered in the online option of the MS HCM program already exist as part of the school's face-to-face part-time MS HCM program. The comparability to the programs offered in traditional instructional formats is clear because the courses are taught in both modalities, and the development of courses is designed to assure that the learning experience is sufficiently similar to warrant this type of consideration.

(iii) A program shall result in learning outcomes appropriate to the rigor and breadth of the program.

The online option of the MS HCM program will allow students to achieve learning objectives that include:

- Students will learn and apply core concepts and tools in the health care management discipline to develop integrated and innovative strategies to address current and emerging business problems.
- Students will learn, integrate and apply key analytical methods to solve current and emerging business problems.
- Students will learn to assess health care management aspects of local and global business contexts and use this assessment as input to current and emerging business decisions.
- Students will assess their team experience and propose strategies for future improvement.
- Students will be able to explain the role of human values in business leadership.
- Students will be able to develop and justify an action plan to manage an ethical challenge they have identified.
- Students will demonstrate the written communication skills essential in business settings.
- Students will demonstrate effective use of the presentation skills that are essential in business.

(iv) A program shall provide for appropriate real-time or delayed interaction between faculty and students.

Each of the courses includes both asynchronous (delayed) and synchronous (real-time) interaction opportunities. Good online course development attempts to find the optimal combination of these to facilitate the learning objectives. The delayed interaction includes listening to prerecorded lectures and the use of discussion boards (among other opportunities). Each course includes some type of real-time contact with audio and video coming primarily from (or at least being controlled by) the faculty but with either text, audio, or video options for students who actively participate in a real time exchange.

(v) Faculty members in appropriate disciplines in collaboration with other institutional personnel shall participate in the design of courses offered through a distance education program.

The faculty who are designing the courses in the proposed program already are full-time or part-time faculty at the university. Any courses yet to be designed for an online learning experience will utilize the help of instructional designers to maximize their quality.

(b) Role and Mission

    (i)   **A distance education program shall be consistent with the institution's mission.**

        Refer to section A.1 in the main body of the proposal.

    (ii)   **Review and approval processes shall ensure the appropriateness of the technology being used to meet a program's objectives.**

        The Carey Business School will utilize Blackboard, a learning management system that has met the test of the market for online course materials. In addition, various technologies will be utilized in facilitating asynchronous and synchronous teaching and learning. The university has a Faculty Advisory Committee on Digital Education charged with guiding the choice of appropriate technologies. This committee is governed by the JHU Provost's office.

(c) Faculty Support

    (i)   **An institution shall provide for training for faculty who teach with the use of technology in a distance education format, including training in the learning management system and the pedagogy of distance education.**

        Faculty development initiatives including online teaching training and collaboration with instructional designers have been provided to faculty. The Carey Business School offers online courses in the Flexible MBA program and a Postbaccalaureate Certificate in the Business of Health Care. The policies and processes governing the implementation of these programs will be transferred to the online option of the MS HCM program.

    (ii)   **Principles of best practice for teaching in a distance education format shall be developed and maintained by the faculty.**

        The Carey Business School will work to ensure that faculty are aware of best practices in online pedagogy. The instructional design staff within Teaching & Learning@Carey produce workshops for the faculty of the Carey Business School as a whole and work specifically with individual faculty to assure best practices in teaching in all environments. At the university level, the Faculty Advisory Committee on Digital Education led by the Provost's office will have a role in this ensuring best practices as well as assuring appropriate technology as mentioned earlier.

(iii) An institution shall provide faculty support services specifically related to teaching through a distance education format.

The Carey Business School designated the 2013-14 academic year as the Year of Instruction, during which online teaching was a primary focus. The school is always committed to the continual offering of online teaching and development programs to the faculty. In the spring of 2015, more than 50 faculty members attended a Saturday afternoon workshop related to online teaching and faculty continue to be engaged in workshops extended their online and face-to-face pedagogical skills on a regular basis. Some of the teaching development initiatives that the school will implement include, faculty events with expert guest speakers, faculty mentoring from faculty who have previously taught online courses, sponsored development faculty conferences and seminars, software workshops and training, and collaborations with instructional designers and instructions technologists.

(d) An institution shall ensure that appropriate learning resources are available to students including appropriate and adequate library services and resources.

The students will have online access to the Milton S. Eisenhower Library on the Homewood campus, which is ranked as one of the nation's foremost facilities for research and scholarship. Its collection of more than three million bound volumes, several million microfilms, and more than 13,000 journal subscriptions has been assembled to support the academic efforts of the University. The interlibrary loan department makes the research collection of the nation available to faculty and students. The library also provides easy access to a wide selection of electronic information resources, including the library's online catalog, and numerous electronic abstracting and indexing tools. Many of the databases are accessible remotely. Librarians help students electronically and the library maintains an extensive web site to take visitors through all of its services and materials.

(e) Students and Student Services

(i) A distance education program shall provide students with clear, complete, and timely information on the curriculum, course and degree requirements, nature of faculty/student interaction, assumptions about technology competence and skills, technical equipment requirements, learning management system, availability of academic support services and financial aid resources, and costs and payment policies.

All such information will be provided to students as part of the marketing for and description of the program. While much of the activity will be asynchronous, all of the courses are expected to include interaction by discussion board, interaction by faculty evaluation of student work in various forms, and some live sessions during the class. The learning management systems will be identified for students and the hardware requirements will be clarified, as will academic support services (see below), financial aid resources, and costs and payment policies.

(ii) **Enrolled students shall have reasonable and adequate access to the range of student services to support their distance education activities.**

Academic Advising. Students are assigned an adviser at the Carey Business School when accepted. Students work individually with the adviser to develop a course of study that meets the requirements of the program and the career goals of the student, although with lack of pure electives in this 36-credit program the key choices for students and advisers in a part-time online program will be assuring that appropriate pre-requisites are taken it a student even finds that he or she cannot follow the path that was originally spelled out.. There is regular communication between the adviser and the students to check on progress and answer questions. Courses that deviate from the program plan and have not been approved by an adviser may not count toward degree requirements. A degree audit tool is provided so students verify their selections match degree requirements.

Library Services. Students have online access to the Milton S. Eisenhower Library on the Homewood campus, ranked as one of the nation's foremost facilities for research and scholarship. The interlibrary loan department allows students access to resources at any other university in the nation. The library also provides easy access to a wide selection of electronic information resources, including the library's online catalog, and numerous electronic abstracting and indexing tools. Many of the databases are accessible remotely. Librarians are available to assist students remotely and the library maintains an extensive web site to take visitors through all its services and materials.

Services with Students with Disabilities. The Johns Hopkins University is committed to making all academic programs, support services, and facilities accessible to qualified individuals. Students with disabilities who require reasonable accommodations can contact the Assistant Director of Student Services at the Carey Business School.

Johns Hopkins Student Assistance Program. The Johns Hopkins Student Assistance Program (JHSAP) is a professional counseling service that can assist students with managing problems of daily living. Stress, personal problems, family conflict, and life challenges can affect the academic progress of students. JHSAP focuses on problem solving through short-term counseling. Accessing the service is a simple matter of a phone call to arrange an appointment with a counselor. Online students may call a phone number for consultation and will be directed to the appropriate resource or office. JHSAP services are completely confidential. The program operates under State and Federal confidentiality legislation and is HIPAA compliant.

Transcript Access. Official transcripts will be mailed upon written request of the student at no charge.

Student ID JCard. The JCard serves as the student's University identification card. This card is mailed to the home address of every registered student. The JCard acts as the university library card, which enables students to check out books from the Homewood Eisenhower Library or at any of the campus center libraries, and provides access to many computer laboratories.

(ii) **Accepted students shall have the background, knowledge, and technical skills needed to undertake a distance education program.**

The learning management system used by the Carey Business School is user friendly. Students who enroll in the online option of the MS HCM program will have demonstrated the technical skills necessary to succeed in a distance education program. Admissions materials emphasize the self-discipline required to succeed in a program that does not have formal class meeting times but requires the student to work at his or her own pace.

(iii) **Advertising, recruiting, and admissions materials shall clearly and accurately represent the program and the services available.**

In the Carey Business School, the marketing staff work directly with academic program managers and the faculty academic program directors to understand the courses and programs of study in order to develop informative and accurate marketing materials.

(f) Commitment to Support

(i) **Policies for faculty evaluation shall include appropriate consideration of teaching and scholarly activities related to distance education programs.**

The Carey Business School treats teaching an online course the same as teaching a course face-to-face. Distance education programs are considered an essential part of the scholarly activities for faculty at the school. At the Carey Business School, each course has the option to conduct a mid-term course evaluation. The mid-term evaluation is anonymous but the results are shared with the faculty prior to the end of the course for the purposes of correction as necessary. If there is a need for correction, the instructional design staff in Teaching & Learning@Carey and other faculty can be brought to interact with the faculty. For online courses, the interaction would be to review discussion board interaction, to attend a live session that is being held, and then to review the application of the grading rubric. In addition, an end of course evaluation is also conducted. The results are reviewed by the Director of Teaching & Learning@Carey as well as by the Vice Dean for Education and the Vice Dean for Faculty and Research. The results are used to improve the course offerings in the future and to determine whether part-time faculty are to be rehired and how to target interventions for full-time faculty.

(ii) **An institution shall demonstrate a commitment to ongoing support, both financial and technical, and to continuation of a program for a period sufficient to enable students to complete a degree or certificate.**

Please see sections J and K of the proposal.

(g) Evaluation and Assessment

(i) **An institution shall evaluate a distance education program's educational effectiveness, including assessments of student learning outcomes, student retention, student and faculty satisfaction, and cost-effectiveness.**

Each course will be subject to a course evaluation and the grade distribution will be assessed. The Carey Business School will also keep a record of the number of students who complete the program and those who do not. For those who withdraw, the courses they have and have not taken toward the completion of the certificate will be tracked. The evaluation will also include an assessment of faculty and student satisfaction via exit interviews for the students and regular meetings for the faculty to understand what is working well and what improvements might be necessary.

(ii) **An institution shall demonstrate an evidence-based approach to best online teaching practices.**

The Carey Business School has multiple rubrics to choose from for evaluating the quality of online courses including: the Quality Matters and Sloan-C rubrics. At the university level, the Faculty Advisory Committee on Digital Education provides additional insight on these issues.

(iii) **An institution shall provide for assessment and documentation of student achievement of learning outcomes in a distance education program.**

Learning objectives are consistent with those of the face-to-face MS HCM program (see section B.2 of the main proposal). The evaluations that will be used can include participation in online discussion boards, presentations, papers, and multiple choice questions, among other means. Each of these can be used to judge whether students have met the learning objectives and planned learning outcomes for the course. The learning management system makes it possible to save and document the results over time

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Appendix D

Finance Information

TABLE 1: RESOURCES:					
Resource Categories	**2017**	**2018**	**2019**	**2020**	**2021**
1. Reallocated Funds	$0	$0	$0	$0	$0
2. Tuition/Fee Revenue (c + g below)	$1,376,580	$3,303,260	$4,144,954	$4,576,318	$5,095,379
a. Number of F/T Students	5	10	10	10	10
b. Annual Tuition/Fee Rate	$53,931	$55,549	$57,215	$58,932	$60,700
c. Total F/T Revenue (a x b)	$269,654	$555,487	$572,152	$589,316	$606,996
d. Number of P/T Students	95	240	302	331	366
e. Credit Hour Rate	$1,075	$1,097	$1,119	$1,141	$1,164
f. Annual Credit Hours	14	14	14	14	14
g. Total P/T Revenue (d x e x f)	$1,056,926	$2,697,773	$3,522,802	$3,937,002	$4,438,383
3. Grants, Contracts & Other External Sources	$0	$0	$0	$0	$0
4. Other Sources	$0	$0	$0	$0	$0
TOTAL (Add 1 – 4)	**$1,376,580**	**$3,303,260**	**$4,144,954**	**$4,576,318**	**$5,095,379**

Resources narrative

1. Reallocated Funds. No funds will be reallocated from existing campus resources.

2. Tuition and Fee Revenue. Tuition revenue is the product of the incremental number of P/T students, the credit hour rate, and the total annual credit hours. In addition, each new student is charged a $500 matriculation fee upon entering the program. For AY 2017, the rate per credit hour is $1,265. An average of 15% discount is granted through student aid, yielding $1,075. It is anticipated that this rate will increase by 2% per year through 2021. The average student completes 14 credit hours (7 courses) per year.

3. Grants and Contracts. There are no grants or contracts that will provide resources for this program.

4. Other sources: The program does not expect any funding from other source.

TABLE 2: EXPENDITURES:					
Expenditure Categories	2017	2018	2019	2020	2021
1. Faculty (b + c below)	$613,899	$1,550,648	$1,984,634	$2,216,377	$2,497,216
a. # Sections offered	22.2	56.0	70.5	77.2	85.4
b. Total Salary	$458,133	$1,157,200	$1,481,070	$1,654,013	$1,863,594
c. Total Benefits	$155,765	$393,448	$503,564	$562,364	$633,622
2. Admin. Staff (b + c below)	$43,550	$66,632	$90,619	$115,539	$141,420
a. # FTE	0.5	0.75	1	1.25	1.5
b. Total Salary	$32,500	$49,725	$67,626	$86,223	$105,537
c. Total Benefits	$11,050	$16,907	$22,993	$29,316	$35,883
3. Support Staff (b+c below)	$30,263	$51,446	$69,967	$89,208	$109,190
a. # FTE	0.5	0.75	1	1.25	1.5
b. Total Salary	$22,500	$38,250	$52,020	$66,326	$81,182
c. Total Benefits	$7,763	$13,196	$17,947	$22,882	$28,008
4. Equipment	$10,000	$10,000	$10,000	$10,000	$10,000
5. Library	$138,865	$348,240	$443,036	$513,551	$567,854
6. New or Renovated Space	$0	$0	$0	$0	$0
7. Other Expenses	$329,400	$395,200	$427,400	$467,900	$514,800
TOTAL (Add 1 – 7)	$1,165,976	$2,422,165	$3,025,656	$3,412,575	$3,840,480

Expenditures narrative

1. Faculty. The number of incremental sections is computed from the incremental student body, with each student taking 7 sections per year. The Carey School's average class size of 30 is used to determine the number of incremental sections that will be required. Faculty cost per section is computed based on the % of faculty salary attributed to teaching multiplied by total faculty base salaries and then divided by the total number of sections to be taught. This number increases by 2% per year. Benefits are added to the salary cost using the Johns Hopkins standard multiplier of 34%

2. Administrative Staff. This includes salaries for administrative staff members, including academic advisers, career advisers and instructional designers, increasing by 2% per year.

3. Support Staff. This includes salaries for Help desk, technical staff, and administrative support staff members, increasing 2% per year.

4. Equipment. Because these incremental courses are online, the school will incur costs related to hosting and managing the courses in an online setting.

5. Library. The school pays for library services at an average rate of $1,500 per student. This rate is expected to remain constant over this planning horizon.

6. New or Renovated Space. No new or renovated space will be needed.

7. Other Expenses. The school will expend money to build and refine online courses for the MS HCM program over the entire planning horizon. Other expenses also include costs associated with marketing the new online option of the MS HCM.