

MARYLAND HIGHER EDUCATION COMMISSION
ACADEMIC PROGRAM PROPOSAL

PROPOSAL FOR:

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

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

Johns Hopkins University

Institution Submitting Proposal

2017

Projected Implementation Date

Area of Concentration

Award to be Offered

**Implementation Science
(within the Doctor of Public Health)**

Title of Proposed Program

1214-00

Suggested HEGIS Code

51.2210

Suggested CIP Code

Bloomberg School of Public Health

Department of Proposed Program

Michael Klag, Dean

Name of Department Head

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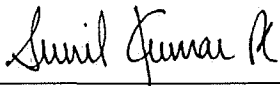
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Signature and Date

12/19/2016

President/Chief Executive Approval

N/A

Date

Date Endorsed/Approved by Governing Board

The Johns Hopkins University
Bloomberg School of Public Health
Proposal for Substantial Modification to an Existing Program

New Area of Concentration in Implementation Science
within the Existing Doctor of Public Health (DrPH)

A. Centrality to institutional mission statement and planning priorities

1. Program description and alignment with mission

The Johns Hopkins University Bloomberg School of Public Health (JHSPH) proposes a new Area of Concentration in Implementation Science in the existing and previously endorsed Doctor of Public Health (DrPH) (HEGIS code 1214-00, CIP code 51.2210), which is available for onsite and online delivery. The new concentration is designed to prepare students to advance the public's health through the integration and application of a broad range of knowledge, analytical skills and competencies that will enable graduates to effectively assume leadership roles in public health both domestically and internationally. The DrPH has been offered by the Bloomberg School of Public Health since 1917.

The new concentration will augment the DrPH program with the opportunity for students to focus on evidence based interventions in public health to improve population health and healthcare. It will be designed primarily for part-time students, who already have substantive public health experience but are interested in further advancing their careers so as to achieve leadership positions in a variety of agencies concerned with promoting public health including state and federal agencies, consulting firms and non-governmental agencies, international organizations and overseas government agencies, as well as health services delivery organizations. Students will have the opportunity to learn methodologies focusing on developing and sharing evidence to support the formulation, implementation and scale up of new health policies and programs, through the application of interdisciplinary tools and approaches to study processes in complex health systems.

2. Alignment with institutional strategic goals

The proposed changes to the DrPH program with a concentration in Implementation Science advance the University's vision, and related strategic goals for Johns Hopkins University, in a number of core ways. The program seeks to enhance access to a graduate education through shifting to a part-time format that allows students to continue working, so as to make the program more affordable and prevent students having to take time away from rapidly developing career trajectories. The program is also global in nature: its part-time basis will facilitate the participation of international students, and the content is designed to reflect a rapidly globalizing world. The

University's Ten by Twenty vision emphasizes interdisciplinary collaboration, which is also a core tenet of the program, supporting students to effectively lead and work in interdisciplinary teams.

The mission of the Bloomberg School is to improve health "through discovery, dissemination, and translation of knowledge and the education of a diverse global community of research scientists and public health professionals." The DrPH focuses in particular on the application of knowledge and ensuring that the public health leaders of tomorrow possess both appropriate analytical skills and the necessary competencies to apply those to solve public health challenges.

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

1. Program outline and requirements

A full course listing, with course titles and descriptions, is provided in Appendix A.

The DrPH program is built around a set of common (foundational) competencies that all students entering the program will be expected to achieve. In addition to these competencies students will achieve an additional six competencies that relate specifically to the newly proposed Implementation Science area of concentration. Students will be required to successfully complete a minimum of 64 term credits, including a practicum and a doctoral dissertation. There are 28 term credits of required courses which are designed to develop knowledge, skills and competencies in foundational areas. These courses are required for all DrPH students. An additional 28 term credits are associated with the student's Implementation Science concentration. The degree can be completed over a minimum of 16 8-week terms.

The DrPH foundational course requirements provide a breadth of skills and competencies relevant to public health leadership including data analysis, health policy, management, and ethics, with particular emphasis on leadership and communication. A series of problem-based courses rooted in real cases provides students with opportunities to integrate skills and apply them to real world problems, while working in diverse, multidisciplinary teams. All students will be required to carry out a practicum in an external organization (that is, an organization external to Johns Hopkins Bloomberg School). This practicum should provide the opportunity for the student to practice higher level skills than those typically entailed in day-to-day work. The practicum will be supported by a preceptor and also through an applied leadership course that enables students to reflect in peer action learning groups on challenges encountered during the practicum and approaches to addressing them. While the practicum itself does not carry credits, the required applied leadership course that accompanies it does.

Students will produce a culminating dissertation (8 credits minimum) that will be supported by their faculty adviser. During the first and second year of the program, the DrPH seminar series will also support students in identifying and shaping appropriate dissertation work, and sharing it with their peers. The DrPH dissertation is a substantive piece of applied analytical work that demonstrates the student's mastery of the chosen analytical approaches, as well as in-depth understanding of the topical area. DrPH dissertations must address applied problems of public health policy and practice.

Standard practices for the review and approval of the DrPH dissertation will be applied with the proposal being examined at a preliminary oral exam (potentially conducted remotely by video conference) by a faculty committee composed of at least three faculty members from three different departments (including the department where the student's primary adviser resides), and one representative of the practice community. The final dissertation will also be reviewed and approved by a committee of four readers including one representative of the practice community. In assessing the quality and acceptability of a DrPH dissertation proposal and final dissertation, the committee should assess the rigor of the analytical methods and the relevance of the topic. It is accepted that high quality data may not always be available for public health decision-making in which case the dissertation should assess the degree of confidence that can be placed in findings, and the implications for decision-making. DrPH dissertations may follow the standard three paper format, or consist of two papers plus a policy briefing paper.

Students applying for admission to the DrPH program should have a minimum of three years relevant public health experience and an MPH degree or equivalent. Students who do not have an MPH degree from an accredited US university may be required to take additional Master's level courses so as to achieve the same level of knowledge, skills and competencies as incoming MPH graduates. Admission standards will be rigorous and will require applicants' academic transcripts, curriculum vitae, letters of recommendation, and statements of purpose. Applicants will also be required to submit standardized test scores (GRE or GMAT). Students for whom English is a foreign language will be required to submit TOEFL scores or a comparable alternative. All of these factors will be carefully considered in the admissions process, with special emphasis on applicants' practice experience and promise as a public health leader, as well as their demonstrated ability to complete required coursework.

2. Educational objectives and student learning outcomes

The goal of the Doctor of Public Health program with a concentration in Implementation Science is designed to prepare students from diverse individual and professional backgrounds to assume leadership roles in domestic and international public health policy and practice positions, as well as in health services delivery settings.

Upon completion of the Doctor of Public Health degree, students will be able to:

1. Identify, synthesize and apply evidence based public health research and theory from a broad range of disciplines and health related data sources for problem solving and to advance programs, policies, and systems promoting population health. (*data analysis*)
2. Identify and analyze ethical issues including balancing the claims of personal liberty with the responsibility to protect and improve the health of the population; and act on the ethical concepts of social justice and human rights in public health research and practice. (*ethics*)
3. Influence decision making regarding policies and practices that advance public health using scientific knowledge, analysis, communication and consensus building. (*policy*)
4. Assess and use communication strategies across diverse audiences to inform and influence individual, organization, community and policy actions in order to promote the health of the public. (*communication*)
5. Enable organizations and communities to create, communicate and apply shared visions, missions and values; inspire trust and motivate others; build capacity; improve performance, enhance the quality of the working environment; and use evidence-based strategies to enhance public health. (*leadership*)
6. Provide fiscally responsible, strategic, and operational guidance within both public and private health organizations, for achieving individual and community health and wellness. (*management*)
7. Design and evaluate system-level and programmatic initiatives in multidisciplinary teams so as promote public health outcomes and health equity (*program design and evaluation*)

The following are the competencies for the Implementation Science area of concentration:

1. Participate in and lead collaborative multidisciplinary teams that promote a blending of disciplines so as to inform implementation
2. Integrate diverse perspectives (e.g. from communities, experts) into a cogent intervention design and/or implementation strategy for health programs and policies
3. Determine implementation processes so as to support iterative cycles of implementation and adaptation based on learning.
4. Evaluate implementation processes and outcomes in ways that can inform implementation
5. Synthesize information from multiples sources so as to inform policy and practice.
6. Present and interpret demographic, statistical, programmatic, and scientific information for use by policy makers and other professional and lay audiences.

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 Johns Hopkins Bloomberg School DrPH degree is designed as a terminal, professional qualification for those aspiring to leadership roles in public health, in both domestic and international settings. The proposed program will be truly global, inspiring learning across diverse countries, and drawing upon Johns Hopkins expertise and experience both domestically and abroad.

The program will combine rigorous training in doctoral-level analytical skills (notably epidemiology, biostatistics, and evaluation) and high-level practice skills (notably communications, systems thinking and leadership). All students will take the same foundational courses and then specialize in their concentration area. The Implementation Science concentration *focuses* on developing and sharing evidence to support the formulation, implementation and scale up of new health policies and programs, through the application of interdisciplinary tools and approaches to study processes in complex health systems.

In addition students will be able to pursue a customized program of study, which will enable students with more specialist interests, for example in mental health, or violence prevention, or obesity to develop a course of study tailored to their own interests and needs.

The DrPH program will be primarily offered as a part-time program. It is designed to serve the needs of those who are already working in a public health role, but are seeking to enhance both their analytical skills and their practice competencies so as to accelerate their career trajectories and enhance their contributions to public health specifically Implementation Science.

Graduates of the DrPH program will be equipped to drive the responsible development of new knowledge and new ways of saving lives and improving health to further progress across core disciplines in science and technology, and public health and medicine in Maryland, and beyond.

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 6) data use and distribution. The Doctor of Public Health program helps to fulfill the Maryland State Plan in a number of these core goals.

The program furthers Goal 2 by providing a program that is primarily online and can be completed on a part time basis. Multiple professional workshops will provide students with skills that are transferable to many work environments. The typical student will take about 20-26 term credits each year for the first 2-3 years and complete the 64 term credit degree in 4-5 years.

The program promotes Goal 4 by preparing students to achieve leadership positions in a variety of agencies concerned with promoting public health including state and federal agencies, consulting firms and non-governmental bodies, and international organizations or government agencies as well as in health services delivery organizations. While built upon the School's existing DrPH curriculum, many courses within the program have been redesigned, as has the course sequence. The program seeks to reduce costs and improve learning "by transforming the way that instruction is delivered and learning environments are designed." The "new modes of delivery and programmatic initiatives" will serve the State's increasingly diverse student population and advance the State's goal of being a "national and international leader in higher education."

The program promotes Goal 5 by helping Maryland meet the challenges of a changing workforce by addressing the need for more people in the workforce with recognized credentials. Program graduates will stimulate economic growth, innovation, and vitality by supporting a knowledge-based economy and advancing research. The program's advisory board will incorporate feedback from professional organizations and public health stakeholders to ensure that the program is aligned with workforce needs.

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

1. Market demand

A survey of recent alumni from the Bloomberg School MPH program was conducted to assess market demand for the redesigned DrPH program. Of the 140 respondents to the survey 63 stated that they were likely or very likely to want to pursue a DrPH program.

The area of concentration is intended for both a domestic and a global audience, serving public health leaders in the US (both at state and federal level), but also public health leaders in rapidly industrializing and emerging economies such as China, Indonesia, India, and Nigeria, and other contexts such as the Middle-East where there are relatively high incomes, but few facilities for post-graduate education in public health. The part time, online nature of the AOC will be well suited to such applicants.

2. Educational and training needs in the region

The Bloomberg School has offered a DrPH program since 1917. Table 2 below indicates the number of applicants (across all departments), number of accepted students and number of students finally enrolling during the three most recent years. As can be seen from the table there is a healthy number of applicants, but due to the funding package that the School offers its doctoral students there are caps on the number of DrPH students that can be accepted into the program. Of those offered places in the program, 60-70% typically accept.

Table 2 – Trends in Applicants and Enrollees in JHSPH DrPH programs

	Applied	Accept	Enrolled
2013	159	40	29
2014	136	31	19
2015	147	36	21

We anticipate that with the new program requirements and a part-time program we will be able to increase both the number of students accepted and the number enrolling.

3. Prospective graduates

If students on average take between 4 to 6 years to complete the program (with roughly equal numbers graduating at the end of the 4th, 5th and 6th year, then a first small cohort (approximately 12 students) of those admitted in summer 2017, will graduate in summer 2021. 25 students are expected to graduate in 2022, 40 in 2023, and 45 in 2024, 49 in 2025, and 50 annually in subsequent years. The average graduation rate for the Implementation Science concentration is anticipated to be 13 a year once the program is at full capacity.

E. Reasonableness of program duplication

1. Similar programs

While there are at least 41 DrPH doctoral degree programs in Public Health across the United States, there are very few DrPH degree programs in Maryland. In Maryland, there is only one other DrPH program approved or endorsed by MHEC, offered by Morgan State University. The concentration in Implementation Science will be the first known concentration of such in Maryland.

The DrPH program offered by Morgan State is a 60 semester credit program that is planned as a 4 year completion for full-time students. Courses are offered in classroom format, on evenings and weekends at the School.

2. Program justification

The Doctor of Public Health program will build upon students' MPH training, and will offer more advanced training in analytical skills (especially analytical skills relevant to their chosen concentration), as well as high level practice-oriented skills particularly in communication and leadership.

The area of concentration will provide the skill sets and competencies necessary for graduates to be promoted and become leaders in addressing critical public health challenges at local, national, and global levels. As a terminal degree it will position graduates for senior management and leadership positions across a range of public-health related agencies and health services delivery organizations, and develop professional networks that will serve students throughout their careers.

F. Relevance to Historically Black Institutions (HBIs)

An appropriate student for the Doctor of Public Health program would apply after attending and completing at least a Master of Public Health degree at any undergraduate institution, including any of Maryland's Historically Black Institutions. The proposed program would not directly affect the implementation, maintenance, uniqueness, identity or mission of these institutions.

G. Evidence of compliance with the Principles of Good Practice

See Appendix B for the evidence that this program complies with the Principles of Good Practice noted above.

H. Adequacy of faculty resources

See Appendix C for a representative list of faculty who will teach and act as mentors for the core courses and in the proposed concentration. Program faculty members hold full-time or adjunct appointments in the Bloomberg School. Program faculty have been recognized for their excellence in teaching and have produced leading public health research while continuing to generate path-breaking scholarship, educating the next generation of leaders in public health.

I. Adequacy of library resources

The book collections at the Johns Hopkins University number nearly four million volumes, selected to support the studies of all departments and divisions of the university. These collections serve to advance research, teaching, and scholarship at the university. No additional library resources will be needed to implement the certificate program.

The William H. Welch Library collects current scholarly information, primarily electronic, which supports the research, clinical, administrative, and educational needs of its clients. The collection covers health, the practice of medicine and related biomedical and allied

health care disciplines, public health and related disciplines, nursing, research literature, methodological literature, reviews or state-of-the-art reports, and in-depth, authoritative analyses of areas influencing biomedicine and health care. The library's emphasis is on providing materials at point of need. As a result, the collection includes more than 5,000 electronic journals, more than 400 databases, and more than 2,000 electronic books. The library has staff members assigned to each department to aid in research and best practices for library services.

The Abraham M. Lilienfeld Library is the primary resource within the school for information in the fields of public health, management science, and the social sciences. The library provides access, via the Johns Hopkins Medical Institution online catalog and specialized bibliographic databases, to information in all areas of interest to the schools' students and faculty. The total library collection is now approximately 30,000 volumes of books, pamphlets and government reports, with a strong emphasis in epidemiology, infectious diseases, health policy and management, the social aspects of health care, and HIV and the AIDS pandemic.

J. Adequacy of physical facilities, infrastructure and instructional equipment

Most courses in the proposed program will be offered online. The program will have no discernible impact on the use of existing facilities and equipment beyond the standard requirements already in place; primarily, faculty office space in an existing university facility location.

While some courses will be offered onsite, no additional facilities, infrastructures or laboratory or computer resources will be required. JHSPH has 26,567 square feet of classroom and student study space. Each classroom has a computer and LCD projector. The school has robust student support services, including a fully staffed information technology team and over 1000 computers located in computer labs and throughout main buildings for student use.

The central computing resource for the School, the Office of Information Technology (IT), provides students with reliable computing infrastructure, location, and device independence, and critical software tools. Additionally, an enterprise service desk offers support for faculty, staff, and students. Assistance is provided over various channels, including phone, desktop, and FIPS 140-2 compliant remote-control support. Customer satisfaction is monitored and benchmarked against other higher educational institutions and industries.

K. Adequacy of financial resources with documentation

See Appendix D for detailed financial information.

L. Adequacy of provisions for evaluation of program

Program level evaluation activities will include an annual assessment of program inputs, processes and outputs to generate a report on program applicants and admitted students, course enrollment, faculty participation, pedagogical innovations and program accomplishments/recognition.

Evaluation of student learning and achievement will focus on the early identification of students' goals/objectives and individualized learning outcomes; students' acquisition of knowledge and skills and the degree to which the program is fostering students' achievement of the degree competencies. Post-degree professional and academic accomplishments of graduates will also be tracked.

Student course evaluations, conducted at the end of each term, will provide feedback about both courses and faculty. The evaluations include questions addressing the course overall, the instructor and the assessments of learning.

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

Any student meeting the admissions requirements can apply to the Doctor of Public Health program. The program will work to help all accepted students improve their workplace competitiveness and reach their professional goals, an aim consistent with the State's minority student achievement goals.

N. Relationship to low productivity programs identified by the Commission

Not applicable.

Appendix A

Course List and Descriptions

Preparatory Requirements

Introduction to Online Learning (0 credits)

Introduction to Online Learning (IOL) will prepare a student for taking both online and on-campus courses offered through CoursePlus, a course management system at Johns Hopkins University. The course is designed to give students clear examples of the fundamental design principles for courses across schools at the University: time-boxed, cohort-based, and highly collaborative. Attention is focused on learner responsibilities and communication/collaboration strategies in both online and face-to-face courses. While ensuring that an individual computer and network connection is compatible with the tools used in CoursePlus is an important part of the course, the primary focus is on the digital course experience and not on teaching basic computer and Web browsing skills.

Introduction to Problem-Based Learning (0 Credits)

This online class will prepare students to participate in courses involving problem-based learning. Problem-based learning is a student-centered approach whereby students work in small teams to address complex, real world challenges. This introductory course will introduce students to the theory of problem-based learning and explore good behaviors and practices in a problem-based learning environment.

550.860 Academic and Research Ethics (0 Credits)

Examines academic and research ethics at JHSPH in a series of online interactive modules. Focuses on information about the academic ethics code and responsible conduct of research at the School. Explores issues of academic integrity such as proper ethical conduct and referencing, and discusses violations such as plagiarism and cheating, relative to case studies that illustrate situations faced by students and faculty in the academic setting. Addresses topics that include responsible conduct of research, authorship, data management, data ownership, guidelines for professional conduct, research fraud or scientific misconduct, federal and institutional guidelines related to research using human and animal subjects and ethical issues involving vulnerable subjects in research.

Introduction to the DrPH Program (0 credits)

This face-to-face module will provide students with an overview of the DrPH Program, the different concentrations on offer, and the requirements of the program.

Foundational Requirements

551.610 Foundations of Leadership: A Survey Course (3 credits)

Students develop an understanding of the role expectations of the organizational leader and the essential knowledge and skills the role requires. Provides a framework for understanding the process of working effectively with, influencing and leading others. Drawing from a variety of disciplines, emphasizes organizational effectiveness, developing a future vision and direction, leading change and building adaptive organizational cultures.

xxx.xxx Applied Leadership Development (3 credits)

This course in applied leadership development will be taken by DrPH students at the same time as they undertake their practicum. The course promotes and supports reflection on and development of students' own leadership principles and practices. The course builds upon the Foundations of Leadership class providing students with an opportunity to both revisit and put into practice their personal leadership philosophy. During the class students will work in small (4-5 person) action learning teams in order to reflect on their experiences of leadership during their practicum. This process of reflection will be supported and prompted by a specialized leadership framework. The final assignment of the class is an individual leadership reflection paper, and the course will culminate in a student conference during the winter institute which will promote sharing and discussion around students' own experiences.

301.772 Making Effective Public Presentations (2 credits)

Enhances skills to construct and deliver oral presentations with clarity and impact. Provides a template for "audience-centered" presentation construction with examples, tools and exercises. Provides individual assessment and feedback for each participant through videotaped exercises and a short formal presentation constructed during the course.

301.771 Case Studies in Communicating with the Media (1 credit)

Provides techniques and guidelines to understand and handle the media during a crisis. Topics include: and overview of the media needs in a crisis, the essential elements of crisis communication plans, tips and techniques for spokespersons, common pitfalls to avoid, audience psychology, non-verbal communication and techniques for communicating complex information to the lay audience. Students review videotapes of news coverage and participate as spokespersons in videotaped simulation exercises.

xxx.xxx DrPH Student Seminar – Developing a DrPH Dissertation (1 credit)

This three part seminar series (taken during the second year in the program) is designed to assist DrPH students in the development of a dissertation proposal and to facilitate the transition from doctoral course work to a dissertation. The course will start by reviewing components of a dissertation proposal and the process through which a dissertation proposal is developed and approved. Students will review and critique already completed DrPH dissertations. Particular emphasis will be placed on identifying a suitable problem or challenge to address in a DrPH dissertation. During the second and third terms of the seminar, students will work individually on developing problem statements, literature reviews, conceptual frameworks, research questions, and study methods. Student evaluation is based on seminar presentations and participation.

xxx.xxx DrPH Problem-Based Sequence 1 –Scaling up and Sustainability: Learning from the India Avahan Initiative (3 credits)

This class focuses on the challenges to managing scaling up of new programs and how effective scale up can affect prospects for sustainability. The class focuses on efforts in India in the early 2000s to ensure rapid scale up of an NGO-based HIV/AIDS prevention program in the high prevalence states, and the subsequent transition of the program to the government of India. A second case focuses on scale up and sustainability of public health programs in the US context. The case addresses issues of management, evaluation and ethics.

xxx.xxx DrPH Problem-Based Sequence 2 – Vaccine safety at the FDA (3 credits)

Focusing on two vaccine related challenges faced by the US Food and Drug Administration, this class will help students to develop competencies in data analysis, communication and policy. In 1999, the FDA realized that given levels of ethylmercury in vaccines, infants who followed the recommended childhood immunization schedule might be exposed to cumulative doses of ethylmercury that exceed some federal safety guidelines. The science behind the case was challenging. Students will play the part of FDA officials seeking both to assess the science, deliberating about how to communicate risk to the public, and managing multiple stakeholders with differing views on the case. The second case in this class focuses on the 2010 contamination of Rotavirus vaccine with pig viruses, and focuses again on assessments and communication of risk and managing negotiations regarding this issue with both national and international actors.

Prerequisite: xxx.xxx DrPH Problem-Based Sequence 1 –Scaling up and Sustainability: Learning from the India Avahan Initiative

xxx.xxx DrPH Problem-Based Sequence 3 – Managing outbreaks: Ebola in West Africa and Zika in the Americas (3 credits)

The Ebola outbreak in West Africa required a very rapid and coordinated response across multiple agencies. This case focuses in particular on analytical methods, including modelling of the epidemic, and issues regarding how to manage uncertainty in such fast moving environments. The case also explores issues of community engagement, systems thinking, and how to link and coordinate public health strategies and clinical containment efforts. Finally, the case will also examine issues concerning research ethics during outbreaks of this nature. Problems from the more recent Zika outbreak in the Americas are also compared and contrasted with the Ebola outbreak.

Prerequisites: xxx.xxx DrPH Problem-Based Sequence 1 –Scaling up and Sustainability: Learning from the India Avahan Initiative, xxx.xxx DrPH Problem-Based Sequence 2 – Vaccine safety at the FDA

xxx.xxx DrPH Problem-Based Sequence 4 – Preventing HIV among African American men (3 credits)

While overall rates of HIV are declining in Baltimore, they are actually increasing among gay and transgender people. This case explores a new program in Baltimore that works closely with community-based organizations to scale up testing and adoption of Pre-Exposure Prophylaxis (PREP) among people who engage in risky behavior, particularly gay men in the African American community. The case seeks to strengthen students' analytical skills, but also focuses on cultural competencies and leadership.

Prerequisite: xxx.xxx DrPH Problem-Based Sequence 1 –Scaling up and Sustainability: Learning from the India Avahan Initiative, xxx.xxx DrPH Problem-Based Sequence 2 – Vaccine safety at the FDA, xxx.xxx DrPH Problem-Based Sequence 3 – Managing outbreaks: Ebola in West Africa and Zika in the Americas

140.620 Advanced Data Analysis Workshop (2 credits)

Covers methods for the organization, management, exploration, and statistical inference from data derived from multivariable regression models, including linear, logistic, Poisson and Cox regression models. Students apply these concepts to two or three public health data sets in a computer laboratory setting using STATA statistical software. Topics covered include generalized linear models, product-limit (Kaplan-Meier) estimation, Cox proportional hazards model.

140.607 Multilevel Models (2 credits)

Gives an overview of "multilevel models" and their application in public health and biomedical research. Multilevel models are statistical regression models for data that are clustered in some way, violating the usual independence assumption. Typically, the predictor and outcome variables occur at multiple levels of aggregation (e.g., at the personal, family, neighborhood, community and/or regional levels). Multilevel models account for the clustering of the outcomes and are used to ask questions about the influence of factors at different levels and about their interactions. Students focus on the main ideas and on examples of multilevel models from public health research. Students learn to formulate their substantive questions in terms of a multilevel model, to fit multilevel models using Stata during laboratory sessions and to interpret the results.

140.608 Analysis of Longitudinal Data (2 credits)

Covers statistical models for drawing scientific inferences from longitudinal data. Topics include longitudinal study design; exploring longitudinal data; linear and generalized linear regression models for correlated data, including marginal, random effects, and transition models; and handling missing data.

Prerequisite: Intermediate level biostatistics & epidemiology

340.768 Professional Epidemiological Methods: Decision Making in Health Situation Analysis (2 credits)

Covers advanced health situation analyses for the evaluation of effectiveness of public health programs using real public health scenarios and available health information datasets. Covers selected epidemiological metrics for measuring social health inequalities and methods for informing evidence-based healthcare decision-making using epidemiologic data. Also addresses the role of available epidemiological evidence and translational research for public health programs. Laboratory exercises provide experience with applying concepts, methods and tools to problems drawn from real epidemiological data and published literature.

Prerequisite: 340.608 Observational Epi or 340.752 Epidemiologic Methods II

340.727 Introduction to Health Survey Research methods (2 credits)

Students learn the basic skills necessary to conduct health survey research, providing both theoretical information and experience in the field. Specifically, students learn about: qualitative methods, the use of theory in informing survey development; development of research questions; probability and non-probability sampling; power calculations; ethical issues of conducting research; and quality assurance/quality control. Hands-on exercises include the development and administration of a brief survey.

410.671 Introduction to Qualitative Research Methods (3 credits)

Introduces students to qualitative research methods applied to the investigation of public health issues. Explores the theoretical underpinnings of qualitative research, factors that influence the utility of a qualitative approach, and ethical considerations in qualitative research. Focuses on the qualitative interview and provides an overview of the practical skills and tools required for conducting qualitative interviews and analyzing qualitative data.

410.673 Introduction to Qualitative Data Analysis for Public Health (2 credits)

Introduces students to the analysis of interview and focus group data collected as part of qualitative public health research. Explores distinct analytic approaches and traditions, and compares the strengths and weaknesses of different analytic paradigms for different research questions. Introduces computer software for coding and managing data using freely available online demonstration of various software packages. Presents both theoretical and practical dimensions of qualitative data analysis. Emphasizes hands-on learning activities within the classroom to practice and apply concepts learned through readings, lectures, and discussion. Develops skills to conceptualize an analytic plan for qualitative data for future research.

Prerequisite: 410.671 Introduction to Qualitative Research Methods

Implementation Science Concentration**550.601 Implementation Research and Practice I (3 credits)**

Combines didactic methods and group activities to explore the rapidly evolving topic of implementation as it pertains to public health research and practice. Provides an overview of the concepts, the theories, tools, and methods used to advance implementation research and practice. Presents key principles of implementation science from a multidisciplinary perspective and provides practical applications of those principles in both practice and research-based settings.

xxx.xxx Implementation Research and Practice II (3 credits)

This class will build upon the existing class in implementation research and practice but provide more in-depth learning around implementation research methods.

Prerequisite: 550.601.01 Implementation Research and Practice I

340.686 Introduction to Systematic Reviews and Evidence Synthesis (2 credits)

Reviews methods used by those performing systematic reviews and meta-analysis, including building a team, formulating a research question and hypothesis, methods for searching the literature, abstracting information, and synthesizing the evidence both qualitatively and quantitatively. Covers how to formulate an answerable research question, defining inclusion and exclusion criteria, searching for the evidence, data extraction, assessing the risk of bias in the underlying studies, qualitative synthesis, meta-analysis, sensitivity analysis, and assessing meta-bias. Acquaints students with a few practicalities of conducting a systematic review using hands-on exercises.

410.721 Translating Research into Public Health Programs I (2 credits)

Examines how behavioral research (especially intervention research) is used, and not used, by policy makers and program administrators to determine what public health services are delivered. Defines the major types of decisions made in determining services to deliver in public health programs and major decision analytic methods used to aid these selections. Types of decisions include (1) how much to invest in service for one disease area relative to another, (2) determining if an intervention is affordable for large-scale delivery, and (3) choosing how much to invest in each of several different types of services within one disease area. Methods include decision tree analysis, cost analysis, and cost-utility analysis.

410.722 Translating Research into Public Health Programs II (2 credits)

Examines how behavioral research (especially intervention research) is used, and not used, by policy makers and program administrators to determine what public health services are delivered. Defines the major types of decisions made in determining services to deliver in public health programs and major decision analytic methods used to aid these selections. Types of decisions include (1) how much to invest in service for one disease area relative to another, (2) determining if an intervention is affordable for large-scale delivery, and (3) choosing how much to invest in each of several different types of services within one disease area. Methods include decision tree analysis, cost analysis, and cost-utility analysis.

Prerequisite: 410.721 Translating Research into Public Health Programs I

221.654 Systems Thinking in Public Health: Applications of Key Methods and Approaches (2 credits)

Systems thinking, (ST), is a holistic approach to analyzing how components of complex systems interact and adapt. Through systems thinking we can understand how societies organize themselves to achieve collective health goals and how different actors contribute to policy outcomes. The practice of systems thinking includes the ability to integrate multiple perspectives and synthesize them into a framework or model that encompasses the various ways in which a system might react to policy choices.

Provides students with an understanding of how to apply ST in public health. Trains students on the fundamentals of ST theory and offers an opportunity to apply key methods and approaches to health policy and health questions. Prepares students to ask relevant research questions and apply a ST lens to describe, understand, and anticipate complex behavior. Examines how systems models can be critically appraised and communicated with others so public health policy makers can exercise a greater degree of wisdom and insight.

221.659 Systems Science in Public Health: Basic Modeling and Simulation Methods (2 credits)

Mathematical and computational modeling and simulation methods have helped transform many industries and fields such as manufacturing, transportation, communications, and finance and are increasingly being used in public health. As the use of such methods continues to grow, regardless of one's eventual role in public health, familiarity with such approaches and methods will likely become more and more important in the future.

Introduces students to mathematical and computational modeling and simulation methods to better understand, evaluate, and improve health systems. Addresses the basic concepts of mathematical and computational modeling and simulation and how they may apply to health systems. Covers the basics of economic and operational modeling and simulation, and introduces advanced Microsoft Excel features and the VenSim software.

Prerequisite: Basic statistics, basic knowledge of Excel

309.616 Introduction to Methods for Health Services Research and Evaluation 1 (2 credits)

Introduces basic methods for undertaking research and program evaluation within health services organizations and systems. In addition to basic methods, also provides "the state of the art" in research and evaluation through the review of major completed studies. Recommended for students who will be carrying out policy research, social science research, or program impact evaluation within health delivery systems. Also relevant to those who will apply the results of Health Services Research (HSR) done by others.

309.617 Introduction to Methods for Health Services Research and Evaluation II (2 credits)

Introduces basic methods for undertaking research and program evaluation within health services organizations and systems, and reviews major completed studies. Topics include the relationship between health services research (HSR) and health care policy and management; the multidisciplinary philosophy of HSR; research design, including experimental and quasi-experimental approaches; issues of reliability, validity, and measurement; survey research techniques; use of existing data systems; basic cost benefit and effectiveness analysis; and measurement of quality of care. Students critique published HSR studies and develop a design for a research or evaluation project.

Prerequisite: 309.616 Introduction to Methods for Health Services Research and Evaluation I

305.605 Public Health Policy: The Intersection of Science and Politics (3 credits)

If you are interested in learning about how the policy development process works in real life, join us for Public Health Policy: The Intersection of Science and Politics. The course, held in Washington, DC, blends lectures, discussions, and interactions with those engaged directly in the policy development process to provide students with an "insiders" perspective on the policy development process. Students will gain a perspective as to how public health policy is a reflection of knowledge, political will and social strategy.

xxx.xxx Implementation Science Concentration Seminar Series (1 credit)

This one credit seminar that students will take in the fourth term of their second year is designed to support them in the development of their doctoral dissertation with a particular focus on the methods and approaches used in Implementation science. Student evaluation based on seminar presentations and participation.

221.645 Large-Scale Effectiveness Evaluations of Health Programs (3 credits)

Reviews the global efforts and methodological challenges in conducting large-scale effectiveness evaluations in health, emphasizing maternal and child health in low and middle income countries. Explores frequently-used approaches for data collection in impact evaluations. Discusses interpretation of results and attribution of observed changes to the program being evaluated. Includes operational arrangements of large-scale evaluations and interactions with policymakers.

313.790 Introduction to Economic Evaluation (3 credits)

Prepares students to read and interpret cost-effectiveness studies. Introduces the basic economic concepts that are needed in order to understand the recommendations from the United States Panel on Cost Effectiveness in Health and Medicine, such as the distinction between opportunity costs and budgetary costs. Considers review recommendations, particularly as they apply to cost-effectiveness research reports. Discusses the relationship between cost-effectiveness results and other elements of the health care policy decision making process.

Appendix B
Evidence of Compliance with the Principles of Good Practice
(as outlined in COMAR 13B02.03.22C)

(a) Curriculum and instruction

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

The proposed area of concentration will be supported by the School's Center for Teaching and Learning (CTL), which offers an array of evidence-based programs and services that support innovative teaching methods. JHPSH faculty experts will lead and support the development of online courses. Several program faculty members are experienced in developing and supporting online learning. New instructors are required to meet the same qualifications as those teaching in the traditional onsite program.

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

All online courses adhere to CTL's course development process with support from experienced instructional designers. Online coursework follows well-established curriculum development standards, tailoring delivery methods, content, and assessments to learning objectives. Each term the School compares student course evaluations for onsite and online courses; these comparisons consistently yield very similar results.

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

The program learning outcomes (competencies) are derived with input from professionals within the discipline, the program faculty, program leadership, and other program stakeholders, and are reviewed by the School's Committee on Academic Standards.

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

The area of concentration will be delivered via the School's course delivery and management system—CoursePlus. This platform supports both synchronous and asynchronous interaction between faculty and students. Students and faculty may also participate in "real-time" interaction through weekly web-conference office hours, supported by Adobe Connect, and pre-scheduled LiveTalks.

- (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.**

Faculty members are selected based on domain expertise, program-related teaching experience and completion of required course development training. Faculty will be fully supported by CTL experts.

(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.**

All courses offered online are designed in conjunction with CTL and with the support of an instructional designer, multimedia producers, and web specialists. These individuals assist in identifying and recommending the most effective learning technologies for achieving the course learning objectives. The course instructor(s) consults with an instructional designer during the course design process to determine the most effective learning technologies and strategies needed to meet the course learning objectives. The course design goes through multiple reviews by the instructional designer and program directors. Program directors ensure that the course design meets the program's expectations for online courses and that the course learning objectives reflect what the program expects students to achieve after completing the course. The CTL design team continually monitors courses and consults with the instructors to make adjustments, if needed. All new online courses participate in a midterm and end-of-term course evaluation process. Midterm feedback is used to determine if any midterm adjustments are needed and the end-of-term feedback is used to assess whether further course refinements are needed prior to the next time the course is offered.

(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.**

Online programs are supported by CTL, which offers a number of opportunities and resources for faculty instructors and teaching assistants to become more familiar with online teaching and best pedagogical practices. In addition to maintaining an extensive catalog of resources on teaching and learning via an online Teaching Toolkit, CTL regularly offers events, workshops, and one-on-one office hours to introduce and provide updates on the latest advances in teaching technology and pedagogy.

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

Prior to teaching their first courses, all new online instructors are required to participate in training that conveys, among other things, principles of best practices for online education.

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

The Bloomberg School, through CTL, maintains an innovative course management system and provides faculty support and training for online education through a staff of more than 30 individuals who specialize in instructional design, audio production, technical writing, web development, production management and quality control.

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

The Johns Hopkins University library system includes the William H. Welch Medical Library on the East Baltimore campus and the Milton S. Eisenhower Library on the Homewood campus. The Welch Library collects current scholarly information that supports the research and educational needs of the Johns Hopkins Medical Institutions as well as the Bloomberg School. Because the library's emphasis is on providing materials at point of need, the collection is primarily in electronic format. The electronic collection includes more than 7,200 electronic journals, more than 400 databases, and more than 13,000 e-books. The WelDoc Service provides access to materials not in the Hopkins collections. The library offers a variety of instructional services, including classes and online tutorials designed to explain the library resources available for research and scholarship. Students have access to all libraries and library informationists.

(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.**

The Bloomberg School maintains numerous web-based resources to inform prospective students on the information they may need as an online student. These resources include the JHSPH website www.jhsph.edu and the Course Catalog. These resources offer detailed programmatic information, academic support services, financial aid, costs, policies, etc. and specific information for online learning. As new online students are admitted and enrolled, they receive timely emails with important information to help them prepare to become an online student. These emails include information on technical requirements, available academic support services, and a required orientation course (IOL) for new online students.

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

JHSPH online students have access to the following academic support services:

Academic advising. Students are assigned an advisor when accepted. Students work individually with the advisor to develop a course of study that meets the requirements of the program and the career goals of the student. The advisor regularly contacts 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.

Library services. Students have online access to the William H. Welch Medical Library and the Milton S. Eisenhower Library on the Homewood campus. The interlibrary loan department allows students access to resources at any other university in the nation. The University's library system provides easy access to a wide selection of electronic information resources, including an 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.

Disability Support Services. 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 JHSPH Disability Services' Senior Director.

Career Services. The Career Services Office at the Bloomberg School helps students, alumni, faculty, staff, and employers navigate the world of public health jobs.

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 contact the service by phone for consultation and are 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. Students may view and print unofficial transcripts at any time. Official transcripts will be mailed to students upon completion of the program; additional official transcripts will be mailed upon request of the student at minimal charge.

Student Login IDs. The University issues each student a Johns Hopkins Enterprise ID (JHED ID) and the School issues a JHSPH ID. The JHED ID grants students a JHU email address and secure access to many online services including course registration, bill payment, official grades, library services, and the online learning platform CoursePlus. Students are also issued a JHSPH ID that provides access to the School's intranet (My JHSPH) where students can locate additional resources including research and administrative tools as well as the School's policy and procedures manual.

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

All accepted online students are required to have met the admission requirements stated for the DrPH program. New online students are required to complete the Introduction to Online Learning (IOL) course prior to beginning their first online courses. IOL covers a broad range of topics on how to be a successful online student such as learning expectations for online students and how to participate in online discussions.

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

All relevant program information is available on the JHSPH web site. All recruiting information includes the URL for the JHSPH website, which contains information available to prospective and current students. The School's Prospectus and Guidebook are posted online, as are school-wide student handbooks and all program-specific handbooks. The School's website contains links to all student-relevant information including admissions requirements, online application and instructions, online registration, student funding resources and financial aid, and other student support services.

(f) Commitment to Support

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

Faculty who teach online courses are strongly encouraged to participate in one or two professional development opportunities annually to improve their online teaching skills. Teaching online is viewed no differently than teaching onsite for promotion purposes.

- (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.**

JHSPH has a commitment to online teaching as demonstrated by the resources of its Center for Teaching and Learning, which provides course development, instructional, and technical support to new and current faculty. See Appendix D for detailed financial information regarding the proposed area of concentration.

(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.**

Please see Section L of the main body of the proposal.

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

CTL continually participates in professional development activities to keep abreast of evidence-based approaches to online teaching practices. These online teaching practices are then incorporated into faculty workshops and training sessions.

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

As part of the online course design process, course assessments are required to be aligned with stated courses learning objectives. The proposed program will incorporate authentic assessments that demonstrate students' application of learned skills. Program faculty have experience with developing individual and collaborative assessments for measuring the acquisition of relevant knowledge and skills through online learning.

Appendix C
Faculty

Name	Terminal Degree	Title/Academic Rank	Status	Course(s)
Olakunle Alonge	PhD	Assistant Scientist	Full-Time	<ul style="list-style-type: none"> • Implementation Research and Practice
Abdulgafoor Bachani	PhD	Assistant Professor	Full-Time	<ul style="list-style-type: none"> • Applying Summary Measures of Population Health to Improve Health Systems
Abdullah Baqui	DrPH	Professor	Full-Time	<ul style="list-style-type: none"> • Large-Scale Effectiveness Evaluations of Health Programs
Stefan Baral	MD	Associate Professor	Full-Time	<ul style="list-style-type: none"> • Implementation Research and Practice
Sara Bennett	PhD	Director for DrPH program; Associate Professor	Full-Time	<ul style="list-style-type: none"> • DrPH Doctoral Seminar • Case-based Class: Scaling up and Sustainability • Systems Thinking in Public Health: Applications
David Bishai	PhD	Professor	Full-Time	<ul style="list-style-type: none"> • Systems Thinking in Public Health: Applications • Population Health
Kitty Chan	PhD	Associate Professor	Full-Time	<ul style="list-style-type: none"> • Introduction to Methods for Health Services Research and Evaluation I • Introduction to Methods for Health Services Research and Evaluation II
Dagna Constenla	PhD	Associate Scientist	Full-Time	<ul style="list-style-type: none"> • Introduction to Economic Evaluation
Melissa Davey-Rothwell	PhD	Associate Scientist	Full-Time	<ul style="list-style-type: none"> • Implementation Research and Practice
Shannon Frattaroli	PhD	Associate Professor	Full-Time	<ul style="list-style-type: none"> • Implementation Research and Practice
Michael Griswold	PhD	Associate Professor	Part-Time	<ul style="list-style-type: none"> • Analysis of Longitudinal Data
Ann-Michelle	EdD	Assistant Professor	Part-Time	<ul style="list-style-type: none"> • Leadership courses
David Holtgrave	PhD	Professor	Full-Time	<ul style="list-style-type: none"> • Translating Research into Public Health Programs I
Douglas Hough	PhD	Associate Scientist	Full-Time	<ul style="list-style-type: none"> • Strategic Planning • Health Economics I • Introduction to Health Economics
Bruce Lee	MD	Associate Professor	Full-Time	<ul style="list-style-type: none"> • Systems Science in Public Health: Basic Modeling
Tianjing Li	PhD	Assistant Professor	Full-Time	<ul style="list-style-type: none"> • Introduction to Systematic Reviews and Evidence Synthesis
Jill Owczarzak	PhD	Assistant Professor	Full-Time	<ul style="list-style-type: none"> • Introduction to Qualitative Data Analysis for Public Health
Tonia Poteat	PhD	Assistant Professor	Full-Time	<ul style="list-style-type: none"> • Problem-Based Class on HIV and Gay Men in Baltimore
Ian Saldanha	PhD	Assistant Scientist	Full-Time	<ul style="list-style-type: none"> • Introduction to Systematic Reviews and Evidence Synthesis

Name	Terminal Degree	Title/Academic Rank	Status	Course(s)
Joshua Sharfstein	MD	Professor of the Practice	Full-Time	<ul style="list-style-type: none"> • Problem-Based Class on Vaccines
Susan Sherman	PhD	Professor	Full-Time	<ul style="list-style-type: none"> • Introduction to Health Survey Research Methods
Katherine Clegg Smith	PhD	Professor	Full-Time	<ul style="list-style-type: none"> • Introduction to Qualitative Research Methods
Patrick Tarwater	PhD	Professor	Part-Time	<ul style="list-style-type: none"> • Advanced Data Analysis Workshop
Brian Weir	PhD	Assistant Scientist	Full-Time	<ul style="list-style-type: none"> • Translating Research into Public Health Programs I
Junya Zhu	PhD	Assistant Professor	Full-Time	<ul style="list-style-type: none"> • Introduction to Methods for Health Services Research and Evaluation I • Introduction to Methods for Health Services Research and Evaluation II

Appendix D
Finance Information

TABLE 1: RESOURCES					
Resource Categories	2017	2018	2019	2020	2021
1. Reallocated Funds	–	–	–	–	–
2. Tuition/Fee Revenue (c + g below)	\$81,024	\$111,309	\$143,360	\$192,026	\$197,683
a. Number of F/T Students	–	–	–	–	–
b. Annual Tuition/Fee Rate	–	–	–	–	–
c. Total F/T Revenue (a x b)	–	–	–	–	–
d. Number of P/T Students	6	8	10	13	13
e. Credit Hour Rate	\$1055	\$1087	\$1120	\$1154	\$1188
f. Annual Credit Hour Rate	12.8	12.8	12.8	12.8	12.8
g. Total P/T Revenue (d x e x f)	\$81,024	\$111,309	\$143,360	\$192,026	\$197,683
3. Grants, Contracts & Other External Sources	–	–	–	–	–
4. Other Sources	–	–	–	–	–
TOTAL (Add 1 – 4)	\$81,024	\$111,309	\$143,360	\$192,026	\$197,683

Resources narrative:

1. Reallocated Funds: No reallocation of existing resources will be required.
2. Tuition and Fee Revenue: The cost is subject to a 3% increase each year. The expectation is that there will be six students in the first year, increasing by one or two each year for the first five years.
3. Grants and Contracts: No grant or contract support is anticipated.
4. Other Sources: Not applicable.

TABLE 2: EXPENDITURES					
Expenditure Categories	2017	2018	2019	2020	2021
1. Faculty (b + c below)	\$115,109	\$118,562	\$122,118	\$125,782	\$129,555
a. # Sections offered	.80	.80	.80	.80	.80
b. Total Salary	\$85,902	\$88,479	\$91,133	\$93,867	\$96,683
c. Total Benefits	\$29,207	\$30,083	\$30,985	\$31,915	\$32,872
2. Admin. Staff (b + c below)	-	-	-	-	-
a. # FTE	-	-	-	-	-
b. Total Salary	-	-	-	-	-
c. Total Benefits	-	-	-	-	-
3. Support Staff (b + c below)	\$15,008	\$15,458	\$16,399	\$16,891	\$17,397
a. # FTE	.20	.20	.20	.20	.20
b. Total Salary	\$11,200	\$11,536	\$12,238	\$12,605	\$12,983
c. Total Benefits	\$3,808	\$3,922	\$4,161	\$4,286	\$4,414
4. Equipment	-	-	-	-	-
5. Library	-	-	-	-	-
6. New or Renovated Space	-	-	-	-	-
7. Other Expenses	\$46,000	\$47,380	\$48,801	\$50,265	\$51,773
TOTAL (Add 1 – 7)	\$176,117	\$181,400	\$187,318	\$192,938	\$198,725

Expenditures narrative:

1. Faculty: Faculty per section is equivalent to one FT faculty teaching at FTE of 80%. This includes salary and a fringe benefits rate of 34%.
2. Administrative Staff: Not applicable.
3. Support Staff: Twenty percent of a support staff member's salary with 3% annual increases and benefits at a rate of 34%.
4. Equipment: Not applicable.
5. Library: Not applicable.
6. New or Renovated Space: Not applicable.
7. Other Expenses: Cost of instructional course needs including online support, scholarships for PT and FT students and adviser stipends.