

APPENDIX A
UNIVERSITY OF NORTH CAROLINA
REQUEST FOR AUTHORIZATION TO PLAN
A NEW DEGREE PROGRAM

THE PURPOSE OF ACADEMIC PROGRAM PLANNING: Planning a new academic degree program provides an opportunity for an institution to make the case for need and demand and for its ability to offer a quality program. The notification and planning activity to follow do not guarantee that authorization to establish will be granted.

Budget _____

Date: January 22, 2014

Constituent Institution: East Carolina University

CIP Discipline Specialty Title:

Health Services Administration

CIP Discipline Specialty Number: 51.2211 **Level:** B ___ M ___ 1st Prof X D
X

Exact Title of the Proposed Program:

Doctor of Public Health with two concentrations: (1) Public Health Administration, and
(2) Environmental and Occupational Health _____

Exact Degree Abbreviation (e.g. B.S., B.A., M.A., M.S., Ed.D., Ph.D.): DrPH

Does the proposed program constitute a substantive change defined by SACS? No.

If yes, please briefly explain.

The current SACS Substantive Change Policy Statement may be viewed at:
<http://www.sacscoc.org/pdf/081705/Substantive%20Change%20policy.pdf>

provides one year to market the program, prior to enrollment in 2017)

Proposed date to establish degree: Month January Year 2016 (This

1. Describe the proposed new degree program. The description should include:

a. a brief description of the program and a statement of educational objectives

Program Description

The proposed Doctor of Public Health (DrPH) at East Carolina University (ECU) is designed to meet the growing demand for public health professionals across the country and in North Carolina, particularly eastern North Carolina (ENC). The proposed DrPH program consists of two concentrations: Public Health Administration (PHA), and Environmental and Occupational Health (EOH). The DrPH is the terminal professional degree for individuals who intend to pursue careers in public health in evidence-based leadership and/or practice-based research. The DrPH program at ECU will prepare candidates for leadership roles in public health education, research, and practice. It is intended to serve full-time students as well as practicing professionals who wish to augment their skills through an advanced degree. The proposed program is designed to provide high quality education through a combination of courses in public health theory, case studies, and practical experience. The proposed program will require a dissertation for completion of the degree. Graduates of the program are expected to assume leadership positions in public health and apply their skills and training towards solving significant public health problems. Graduates of this program will make excellent candidates for leadership positions in government (local, state, or federal public health institutions), non-profit institutions (health advocacy or community service), or for-profit institutions (health organizations or the pharmaceutical industry). They will also be trained and prepared to teach in higher education.

Educational Objectives

The goal of the DrPH program is to expand capacity for the advancement of public health leadership particularly among the rural, underserved and multi-cultural communities. To this end, the DrPH program aims to train graduates to be future leaders, teachers and researchers in public health with the ability to create and implement evidence-based public health programs.

The primary program objectives are:

- Collaborate with academic and community partners to expand the current substantial capacity to become a regional resource for the advancement of public health practice and solution of significant public health problems including health disparities;
- Prepare graduates to develop and implement evidence-based decision-making through an applied, practice-based curriculum that positions them for success in leadership positions within universities, government agencies, private organizations, and industries, locally and across the state and nation; and
- Prepare graduates to effectively communicate important public health questions, ideas, and research results to individuals both inside and outside the health sciences, and to work with or to lead interdisciplinary teams.

Learning objectives for the program include the following competencies:

The DrPH degree graduates will be able to:

1. Synthesize information from multiple sources for research and practice;
2. Apply theoretical and evidence-based perspectives in research and practice;

3. Analyze issues and problems in public health using critical evaluation, applied research, and statistical methods;
4. Translate research and analysis results into evidence-based decision-making in public health practice;
5. Organize and present qualitative, quantitative and/or economic data to various audiences, including the rural underserved and multicultural communities;
6. Use informatics in the design and implementation of public health programs;
7. Demonstrate an understanding of the legal and ethical foundations of public health; and
8. Teach college level courses in public health.

The following are the relevant concentration-specific competencies:

DrPH in PHA graduates will be able to:

1. Influence health policy and practice using scientific evidence, stakeholder input, and public opinion data;
2. Guide an organization in setting goals, objectives, and priorities;
3. Design action plans for enhancing community and population-based health;
4. Implement culturally and linguistically appropriate programs, services, and research
5. Communicate an organization's mission, shared vision, and values to stakeholders;
6. Develop teams for implementing health initiatives;
7. Develop capacity-building strategies at the individual, organizational, and community levels;
8. Implement strategic planning processes;
9. Apply principles of human resource management;
10. Deploy quality improvement in public health practice;
11. Organize and manage work environments effectively;
12. Develop financial and business plans for health programs and services;
13. Evaluate organizational performance;
14. Manage potential conflicts of interest encountered in health organizations and
15. Teach college level courses in health administration.

DrPH in EOH graduates will be able to:

1. Evaluate human health hazards by assessing environmental and occupational exposures;
2. Conduct environmental and occupational epidemiological research on hazard prevention and control;
3. Identify and recommend appropriate interventions, such as engineering controls, behavior change, or material substitution for reducing human exposures to environmental and occupational hazards;
4. Describe the structure and function of human organ systems and identify environmental and occupational agents that disrupt these systems to cause disease and injury;
5. Identify the main mechanisms by which environmental and occupational agents gain access to adversely affect human health, as well as factors which affect susceptibility to such adverse effects

6. Demonstrate effective oral communication in professional and community settings on public health issues and on environmental and occupational health hazards;
7. Describe scientific principles, societal and ethical values' influence on decision-making regarding environmental and occupational issues in research, public health practice, policy, and management;
8. Develop, design and describe an environmental or occupational problem or concern using applied methods, qualitative and quantitative software; and
9. Teach college level courses in environmental and occupational health

b. the relationship of the proposed new program to the institutional mission

The proposed DrPH with concentrations in public health administration (PHA) and environmental and occupational health (EOH) at East Carolina University (ECU) is designed to meet the growing demand for public health professionals and leaders with an emphasis on transforming rural and minority health and reducing health disparities. The proposed program is in alignment with the mission of the Department of Public Health at ECU to educate, conduct research, provide service, and advocate for improved health of communities, emphasizing rural and disadvantaged populations. ECU is a leadership institution with the mission to serve as a national model for public service and regional transformation, expressed in the *ECU Mission Statement* pending Board of Governor's approval:

To be a national model for students success, public service and regional transformation, East Carolina University

- *Uses innovative learning strategies and delivery methods to maximize access;*
- *Prepares students with the knowledge, skills and values to succeed in a global, multicultural society;*
- *Develops tomorrow's leaders to serve and inspire positive change;*
- *Transforms health care, promotes wellness, and reduces health disparities; and*
- *Improves quality of life through cultural enrichment, academics, the arts, and athletics.*

We accomplish our mission through education, research, creative activities, and service while being good stewards of the resources entrusted to us.

This program is in alignment with ECU's mission and aims to train leaders for transformation of public health in ENC. More specifically, the proposed DrPH at ECU will contribute to the university's vision of regional transformation through the following:

- Strengthening academic programs that support health and the health sciences with a concentrated focus on providing graduate level distance education courses;
- Adding to the growth of a knowledgeable, skilled, and adaptable public health labor force and leadership to address health issues affecting ENC;
- Exploring and implementing innovative approaches to health and health care research

- through community, regional and national collaborative efforts;
- Developing public health leadership capacity through higher education, research and collaboration with agencies, communities and other institutions;
- Creating more effective and equitable systems of delivery to address campus, local, regional, and state health needs;
- Maximizing the impact of the Academic Health Center in public and private partnerships;
- Leading and fostering partnerships that fuel innovation, entrepreneurship, and knowledge transfer throughout the region;
- Positioning the region as a magnet for talent, creativity, and investment; and
- Using innovative learning strategies and delivery methods to maximize access.

Community based translational research will be an important component of the DrPH program and will place emphasis on addressing ENC public health issues, rural health and health disparities. The DrPH will educate students in evidence-based public health. Development of the DrPH will expand and enhance current engagement activities with communities, training of qualified health professionals and leaders. It will emphasize and enhance the study of rural health, minority health, health disparities and chronic conditions including obesity, diabetes, cancer and cardiovascular disease that disproportionately affect ENC.

c. the relationship of the proposed new program to existing programs at the institution and to the institution's strategic plan

The Department of Public Health has strong collaborative relationships with many departments and programs at ECU. The collaborations include co-teaching and cross-listing courses, interdisciplinary research projects, consultations, assessments, curriculum planning, service-based collaborations and others. These collaborations build-in multidisciplinary perspectives and problem solving approaches necessary for public health effectiveness. They will enhance the quality of the proposed DrPH. The Department of Public Health works collaboratively with the following programs and departments:

- Department of Health Services and Information Management with focus on health informatics;
- Center for Health Disparities in analysis and creating interventions;
- Departments of Family Medicine and Pediatrics with regards to healthcare access;
- Schools of Social Work and Communication, with particular emphasis on health communications;
- Department of Health Education and Promotion in teaching and prevention programs; and Environmental Health Sciences, Occupational Safety Programs and the N.C. Agro-medicine Institute in improving occupational safety and health in agriculture and other industries.

The proposed plan for a DrPH at ECU will help meet some of the goals and commitments of the university's strategic plan for 2013-2018 "Our Time Our Future." The DrPH program goals are particularly relevant to the following three commitments in the strategic plan:

We will rededicate ourselves to improving the health of all North Carolinians

We will promote diversity and maintain an environment that celebrates and values the many perspectives, cultures, and traditions of our state;

We will engage in outreach and development that nurtures the connections between the University and the people and communities of North Carolina

The program's focus in training, outreach, collaborations with rural communities, rural health and health disparities will contribute towards meeting these three commitments.

The strategic plan has the following goals:

1. *Setting degree attainment goals responsive to state needs*
2. *Strengthening academic quality*
3. *Serving the people of North Carolina*
4. *Maximizing efficiencies*
5. *Ensuring an accessible and financially stable university*

The proposed DrPH program will help meet the need for trained leadership and transformation in a changing health system in the state. The Patient Protection and Affordable Care Act (ACA) introduced major changes in the health system. Implementation of these changes will require professional leadership in the health system. This program addressed the first goal through training professionals and leaders for the changing health system. Furthermore, the program will address goal 3 of the strategic plan. Specifically, the program addresses the following strategy of goal 3:

Help address North Carolina's health care needs by rethinking outdated models of care, conducting life-saving research, and training the next generation of medical professionals

This strategy is based on recognition of: shortages in health professionals, health disparities, the changing health system and the need to train leaders and professionals for "health system of the future". The proposed DrPH program is directly relevant to goal 3 and the stated strategies. The professionals trained through the proposed program can assist in leadership roles and coordination of care as the nation transitions to new methods of health care delivery under the ACA. Goal 3 points to the critical need to address health disparities in rural North Carolina. This is the current focus of the ECU Department of Public Health education and research activities and these will be expanded by the proposed DrPH.

d. special features or conditions that make the institution a desirable, unique, or cost effective place to initiate such a degree program

Features that make ECU a suitable home for this program are: location, university mission, program focus and a proven track record for addressing health needs of underserved rural and minority populations. Relative to the entire state, the eastern North Carolina (ENC) region has a higher percent of poor, economically distressed, minority and medically underserved populations. This population experiences significant health disparities. They have significantly

higher rates of obesity, cardiovascular illness, diabetes, lung and cervical cancer and late stage breast cancer. ECU is located in the heart of ENC and has a vital role in providing healthcare and other services to communities in the region. A major focus of the school of medicine is transforming the region and reducing health disparities. As a significant part of carrying out the mission of the medical school, the proposed DrPH is designed with an emphasis on addressing health needs of rural communities and reducing health disparities. Its curriculum will reflect this focus.

ECU has a proven record for training individuals from minority, underserved and rural communities in ENC. The proposed DrPH will keep this focus and in the process it will contribute to increasing diversity in the health workforce – a need identified by the American Public Health Association. Although minority populations compose 25% of the population, they represent only 10% of the health workforce. Increasing diversity in the health labor force will aid reduction in health disparities through culturally-competent service provision in response to the needs of minority and underserved populations. A large proportion of health services for minority and underserved populations are accessed through public, mobile, and school-based clinics and telemedicine. Training individuals from underserved areas will improve availability of services and reduce health workforce shortages. Furthermore, the ACA includes numerous provisions that reauthorize programs under Titles VII and VIII of the Public Health Service Act as well as authorize several new initiatives to support a diverse and culturally competent workforce. Thus the proposed program is forward-looking with attention to innovation, the evolving structure and needs of the health system.

The Department of Public Health, together with its affiliated Center for Health Systems Research and Development, and Center for Health Disparities, have been active in researching health disparity issues with special attention to eastern North Carolina. Faculty members have a focused research agenda on the top health issues in the region, including diabetes, obesity, cancers and cardiovascular diseases. The Department has collaborated successfully with local communities on many projects to help the underserved populations in the region. Consequently, the Public Health Department has the necessary connections and networks in the community to provide student with the necessary practical experience and community-based research and study approaches.

The proposed DrPH in EOH at ECU would be distinct in several ways. First, the program would be aligned with the mission and vision of BSOM with an emphasis on rural and health disparities of the eastern NC region. The primary emphasis on this doctoral-level training would be an applied, practice-based learning approach. Proposed students would be encouraged to focus their research proposals on demonstrated leadership in the areas of environmental and occupational problems specific to the rural issues common to this region.

Second, ECU is juxtaposed to the prominent Research Triangle area and the surrounding region where many industries, businesses, state and federal government agencies are located. This offers easy access and provides unique opportunities for collaboration and opportunities for students with potential employers and post-doctorate positions. Faculty in the DPH has had personal communication with leaders at state, federal agencies including Environmental Protection Agency, National Institute of Environmental Health Sciences (NIEHS), Centers for Disease Control and Prevention (CDC) to discuss the proposed DrPH in EOH at ECU. Discussions were positive and each agency shared strong support, including potential internships, research projects and potential career opportunities for graduates.

Third, existing highly qualified faculty located in DPH and CHHP have the qualifications and capabilities for building this proposed rigorous program.

Fourth, the proposed DrPH EOH would be the only program of its kind in NC and the surrounding region. To build support for this initiative we have had meetings with the Chair and faculty in the Department of Environmental Sciences and Engineering; Chair of Occupational Safety and Health at UNC Chapel Hill. As outlined in the attached memorandum, discussions included collaborations on research, student projects and course sharing. Letters of support from UNC will be forthcoming and submitted at a later date.

Completion of the DrPH degree in EOH at ECU would prepare students to be researchers, teachers, and managers who can meet the public health needs of rural populations. It would also prepare future faculty members for the growing number of training programs in public and community health and leaders for the environmental and occupational public health workforce.

The proposed program curriculum will be designed to train part-time and full-time students to develop a broad understanding and in-depth knowledge of the complexities of environmental and occupational health problems as applied to rural and underserved populations. The DrPH degree would be aimed at preparing students and working professionals for advanced professional positions in EOH research, management and practice. Doctoral training for the proposed DrPH would be grounded in fundamental sciences and analytic approaches for evaluating and communicating health risks. This professional degree would focus upon public health practice related to prevention, assessment, and control of occupational and environmental exposures, injuries and illnesses, which constitute major concerns in low socio-economic areas, particularly in eastern N.C.

Many of the above core principles are inherent in existing courses at ECU, including undergraduate and graduate programs in environmental and occupational health in the College of Health and Human Performance (CHHP) and the Master of Public Health (MPH) in DPH. The DrPH degree would expand on existing master level programs by training students to develop in-depth knowledge of the complexities inherent in environmental and occupational health problems with a focus on practice based learning and research in rural and underserved areas. The proposed DrPH degree in EOH program would be offered through the Department of Public Health and strategically aligned to fulfill the mission and vision statement of ECU. This would be accomplished by training practitioners and providing them with advanced knowledge to help meet the shortfall of public health workers in EOH while reducing public health problems that challenge our state and region.

ECU has been successful in establishing a graduate-level public health program. The master of public health (MPH) program began at ECU in 2003 and was accredited by Council for Education in Public Health (CEPH) in 2007. It received re-accreditation in 2012 which is effective until 2019. The department continues to experience remarkable success maintaining an annual enrollment of approximately 102 students. Since 2003, 250 students have graduated with an MPH from ECU. Approximately 75% of the graduates are working in public health practice in North Carolina. In addition, the Department of Public Health demonstrates a commitment to community engagement and maintains strong linkages with state and local health departments, community hospitals, area aging and long-term care agencies, and physician offices throughout the region. The proposed degree program will build on this foundation. It is anticipated that this successful MPH degree will serve as a feeder for the DrPH program.

The proposed program builds on a substantial foundation in health and healthcare in eastern North Carolina. The Division of Health Sciences at East Carolina University provides

enhanced training in prevention and population health to multi-disciplinary students.

Components of this development include the following:

Brody School of Medicine (BSOM): The ECU BSOM is a nationally recognized leader in primary care and rural health. It shares with its affiliate and major teaching hospital, Vidant Medical Center, a 725- bed facility. These two institutions and the medical community of Greenville, including the East Carolina Heart Institute and the Leo W. Jenkins Cancer Center, comprise the University Medical Center of ENC. These facilities serve as the medical hubs for the region including referral and tertiary care centers for the 29-county catchment area.

School of Dental Medicine: The ECU School of Dental Medicine is housed in a new, 188,000-square-foot world-class learning facility on ECU's Health Sciences Campus. It is comprised of classrooms, dental clinics, administrative offices and teleconference rooms and is symbolic of ECU's historic mission to make a difference in the health of North Carolinians. The school is expected to help ease the statewide shortage of dentists, especially in eastern North Carolina. The school aims to educate dentists who want to stay in the state to practice, particularly in rural areas. All students accepted into the School of Dental Medicine are North Carolina residents with a demonstrated commitment to serve the people of their home state. The school's innovative curriculum uses technology to improve traditional dental education. Outside Greenville, the school's first community service learning center opened in 2012 in Ahoskie. Up to 10 are planned for the state. At those centers, faculty members, dental residents and fourth-year dental students provide care to low-income, community residents. Students and residents learn what running a practice in an underserved area is like.

College of Allied Health Sciences: Similarly, the College of Allied Health Sciences at East Carolina University provides students opportunities to make a difference in the health of the region, state, and nation. Master's degrees are offered in communication sciences and disorders, health informatics and information management, occupational therapy, physician assistant, rehabilitation and career counseling, and substance abuse and clinical counseling. Doctoral degrees are offered in communication sciences and disorders, physical therapy, rehabilitation counseling and administration, and audiology.

College of Nursing: The College of Nursing (CON) is an academic unit in the Division of Health Sciences at ECU. It serves as a center of excellence for leadership in nursing, professional nursing education, research, service, and faculty practice within a multicultural, underserved, and rural region. It offers baccalaureate, masters, and doctoral degrees. The objectives of the CON are to prepare well qualified entry level nurses, nurse educators, advanced practice nurses, nurse leaders, and nurse scientists; advance nursing science through engagement in research and clinical scholarship; and engage in collaborative, interdisciplinary partnerships that improve the health care provided in rural underserved communities. The college has over 7000 alumni, many of whom are in leadership positions throughout the state. The CON received Board of Governors' approval to implement the Doctor of Nursing Practice (DNP) in fall 2013.

College of Health and Human Performance: The College of Health and Human Performance is dedicated to the promotion of health and well-being through basic and applied research,

service, and professional training of its students. Programs of study in the college provide a foundation for professional practice in the fields of health education, exercise and sport science, recreation and military studies. The College of Health and Human Performance offers baccalaureate and master's degree programs through its Departments of Health Education and Promotion, Kinesiology, and Recreation and Leisure Studies, and PhD program in the Department of Kinesiology.

Department of Health Education and Promotion: The Department of Health Education and Promotion aims to improve the health and well-being of individuals, communities, populations, and the environment through excellence in teaching, research and service. The Environmental Health Sciences graduate and undergraduate programs train students for personally and professionally rewarding careers in public health, occupational health, institutional health and environmental protection. This is accomplished through identifying, characterizing and developing, applying and valuating intervention strategies to reduce environmental hazards and associated risks. Both the graduate and undergraduate Environmental Health Sciences Programs at East Carolina University are accredited by the National Environmental Health Sciences and Protection Accreditation Council.

North Carolina Agromedicine Institute: The North Carolina Agromedicine Institute (NCAI), chartered by the UNC Board of Governors, is an inter-institutional partnership among ECU, NC Agricultural and Technical State University and North Carolina State University. The institute addresses the agricultural occupational health and safety needs of North Carolina's farming, fishing, and forestry communities through research, outreach and service. The Institute supports faculty research that can be translated into effective education/outreach and prevention intervention programs to reduce the health and safety risks of all members of the agricultural community.

Nationally, the dynamics of increased attention to health and health care issues, and now the need to emphasize prevention strategies as opposed to a focus on illness care, have been associated with rapid growth of the number of schools of public health. The growth patterns indicate that there are advantages to adding a school of public health to a university with a health sciences division. Advantages accrue in the training not only of public health students but other health professionals.

These ECU Division of Health Sciences programs work collaboratively in interdisciplinary teams necessary to solve today's complex public health challenges. The proposed DrPH program is uniquely situated to provide a nexus for further integration and trans-disciplinary work. Public health administrators are needed as leaders and communicators to provide vision and to bring individuals with different backgrounds together to address public health issues. Other compelling reasons for establishing the DrPH program are: environmental and occupational health concerns in local communities; need for health systems and population health improvement; the strong health and health care focus at ECU; and the Department of Public Health's history of success in offering the MPH at ECU with 75% of its graduates living and working in East Carolina.

2. Provide documentation of student demand and evidence of the proposed program's responsiveness to the needs of the region, state, or nation.

Several factors suggest a significant demand for professionals and leaders with DrPH training:

1. A number of our current and former students and public health workers have indicated their interest in enrolling in a doctoral program with a health administration concentration. There is evidence that current programs in North Carolina do not meet the demand for DrPH in health administration. Of the 10 doctor of public health programs with EOH, we have received reports of student demand exceeding available enrollment slots. Hydraulic fracking, ground and surface water contamination, environmental justice and other concerns are current environmental issues that should be addressed through advanced research.
2. The Patient Protection and Affordable Care Act (ACA) introduced significant structural changes to the health system through several provisions that shift focus to: prevention; patient-centered care; patient safety; improving quality of care; new care delivery modes (such as accountable care organizations, patient-centered, medical homes); rural health programs; care delivery through community health centers; and funding for public health workforce. These provisions revolutionize the US health system and encourage a blurring of the distinction between public health and medical care. Effective implementation of the health system changes will require trained leaders and professionals in public health. The proposed DrPH will train leaders who will implement changes and oversee provision of health services under the new health system;
2. More importantly, with the implementation of ACA, millions of Americans have become eligible for health insurance coverage options through the Health Insurance Marketplace and have better access to health services. Current CBO estimates indicate that by 2019, 25 million more nonelderly Americans will have obtained private insurance through the new health insurance exchanges (marketplaces) and 12 million will have gained coverage under Medicaid. This additional influx of people into the system creates increasing challenges for both healthcare providers and administrators. In addition, to implement ACA, new models of healthcare delivery have been implemented in some communities, such as patient-centered medical home. Still, new models need to be created to better improve quality and reduce cost. Healthcare providers will be challenged to provide a higher quality of care without increasing cost. A renewed call has been made to better integrate public health and medicine. To meet with these challenges and implement ACA successfully, it is important that senior public health officers have advanced trainings in public health administration. The DrPH at ECU will contribute to the build-up of both the senior public health leadership team and faculty members;
3. The Association of Schools of Public Health (ASPH) which represents accredited schools of public health in North America, has described a "looming public health workforce crisis" that indicates the need for an additional 250,000 public health workers by 2020 (which coincides with the first graduates of the new program).

In 2020, a public health workforce of more than 700,000 will be necessary to achieve the 220:100,000, the ratio that prevailed in 1980. This means that schools of public health will have to train **three times** the current number of graduates to meet the projected labor

force needs. The ASPH recommends expansion in training opportunities for public health work-force, data collection about this workforce and a significant increase in public health research and training in population health, primary prevention and community-based public health systems.

Several sources indicate that approximately 25 percent of the public health workforce is due to retire by 2020. The impending workforce shortage is expected to critically affect the governmental public health workforce – the sector in which graduates of the proposed degree program are most likely to seek employment. For example, a recent survey estimates that up to 50 percent of the workforce in some state health agencies will retire in the next ten years. While all these public health workers will not need a DrPH, their administrators and leaders will benefit from such training;

4. The 2010-20 projections from the Bureau of Labor Statistics indicate that the health industry will create 28% of all new jobs in the US economy. Healthcare is projected to grow by 33% or 5.7 million new jobs. Furthermore, these projections indicate that the fastest growth rate will be in jobs requiring graduate-level training. The growth in healthcare will require competent health administration and leadership. The DrPH in health administration will contribute to training health administration professionals and leaders;
5. As the large baby-boom population ages and people remain active later in life, the healthcare industry as a whole will see an increase in the demand for medical services resulting in the need for more well trained administrators;
6. The anticipated workforce shortage is exacerbated by the limited capacity of existing training programs. Applications to schools of public health have doubled in the last ten years and it is estimated that over the next 11 years, schools of public health would have to train three times the current number of graduates to meet projected needs. Currently, public health schools cannot accommodate demand and will therefore be unable to meet increased demand;
7. *North Carolina Community Health Center Association (NCCHCA)* estimates that by 2016, there will be a significant shortage of senior leaders needed to meet the demand resulting from expansion efforts through the Patient Protection and Affordable Care Act. Given these projections, there is a considerable need to train public health professionals in the specific areas pertinent to community health center operations and leadership in NC. This is a major focus area of the DrPH in health administration;
8. Health administration is critical to efficiency and effectiveness of the health industry. Among other duties and responsibilities, health administrators oversee medical and public health personnel as well as planning, assessment, management, and public health emergency preparedness. Therefore, as the structure and financing of the health industry changes, health administrators must be trained to adapt to new environments and systems. The ACA introduces profound changes in the health system that will impact public health planning administration, assessment and preparedness programs across the nation. Public health administrators will require training on how to leverage the ACA provisions to strengthen the resilience of the public health preparedness systems as well as greater efficiency in providing services, assessment, and in planning.
9. According to the Bureau of Labor statistics, (2012), employment opportunities for environmental scientists and specialists are projected to grow by 19 percent from 2010-2020. Occupational health specialist jobs are expected to grow at 9 percent during that same time. Job opportunities in the fields of occupational and environmental health are

available in a variety of state, federal regulatory and public health agencies including Occupational Safety and Health Administration (OSHA), Nuclear Regulatory Commission (NRC), Environmental Protection Agency (EPA), Mine Safety and Health Administration (MSHA), Centers for Disease Control and Prevention (CDC), National Institute for Occupational Safety and Health (NIOSH), Department of Transportation (DOT) and others;

10. There is a shortage of environmental health professionals in the public sector. Current challenges for recruiting and retaining existing environmental health workers include low pay scales at the state level, minimal advancement opportunities, and competition with the private sector. State environmental programs often serve as a training ground for people to learn needed skills and then move into the private sector at higher salaries. Therefore, there is a need to train individuals to fill leadership positions in environmental and occupational health in the public sector;
11. There is also a demand for these professionals in manufacturing, agriculture, and other industries in the private sector;
12. Issues such as bioterrorism, ergonomics, toxic exposures, indoor air quality, work place violence, wellness, productivity, and absence management are all areas that come under the realm of the occupational and environmental health fields;
13. Undeniably, an unstable economy over recent years has led to significant budgetary cuts that have severely impacted public health programs across the country. Health departments and agencies have suffered significant budget cuts including a reduced workforce. The area of environmental and occupational health opportunities may have shared in these economic shortfalls; however, many workforce sectors are regaining strength. In light of the economic shortcomings, societal needs to protect public health remain a top priority and the areas of environmental and occupational health job opportunities show increasing promise. According to the Bureau of Labor (2012), employment opportunities for environmental scientists and specialists are projected to grow by 19 percent from 2010-2020. Occupational health specialist jobs are expected to grow at 9 percent during that same time. Note, these numbers may vary, since these jobs were projected for those holding only Bachelor degrees;
14. Job opportunities in the fields of occupational and environmental health are available in a variety of state, federal regulatory and public health agencies including, Occupational Safety and Health Administration (OSHA), Nuclear Regulatory Commission (NRC), Environmental Protection Agency (EPA), Mine Safety and Health Administration (MSHA), CDC, NIOSH and Department of Transportation (DOT). Issues as diverse as bioterrorism, ergonomics, toxic exposures, indoor air quality, work place violence, wellness, productivity and absent management are all areas that come under the realm of the occupational and environmental health fields;
15. Appropriate training for participation in occupational and environmental health programs includes skills in clinical, environmental and occupational medicine, toxicology, epidemiology, biometry, industrial hygiene and population health. In addition, practitioners in this field collaborate with others including, occupational health nursing, safety engineering, industrial relations, health physics, ventilation engineering, mechanical engineering, biomechanics, law, public policy, and health education (http://www.acoem.org/Scope_HealthPrograms_Practice.aspx);
16. The federal government is the single largest employer of environmental health professionals in the United States. Although the Environmental Protection Agency (EPA) has the lead role in administering and enforcing many environmental laws, other federal

agencies, such as the Public Health Service (PHS) and the Occupational Safety and Health Administration (OSHA), also have direct statutory authority or involvement in environmental health issues. Moreover, many environmental health professionals are employed by federal agencies whose primary mission is not related directly to the protection of environmental health (e.g., the Department of Defense);

17. In 2011, NIOSH released the report, the *National Assessment of the Occupational Safety and Workforce* (http://www.cdc.gov/niosh/oshworkforce/pdfs/Appendix_A.pdf), primarily to, 1) assess the current supply and future demand for occupational health professionals, and 2) determine the professional competencies (skills, knowledge and abilities) required for the next 5 years. Findings from the report identified that currently a large number of occupational health professionals are over the age of 50 and will be retiring in the near future. Employers are expected to hire over 25,000 occupational health professionals over the next 5 years, with many of these being filled by new graduates. This results in a larger number of hires than current occupational training programs are producing and suggest the need to produce additional graduates. Challenges of environmental and occupational diseases, safety and risk concerns continue to occur and the need for leadership in these areas is critically important; and
18. Based on the evidence gathered, there appears to be a need and demand for the DrPH degree in EOH. Such a program would have the capability to train doctoral-level students about environmental and occupational health problems affecting rural and underserved populations. Examples of candidates that would be targeted for the proposed program would include, mid-career, working professionals and/or public health managers wishing to seek advancement in their current workplace. It would also target students with backgrounds in environmental science, occupational health, industrial hygiene, environmental policy, environmental epidemiology, medicine, public health management and other related disciplines. Students that are graduating from neighboring universities and ECU, BSOM, and College of Health and Human Performance with advanced degrees, including the Master of Public Health (MPH), Master of Science in Occupational Safety (MSOS), Master of Science in Environmental Health (MSEH), would be ideal candidates for the DrPH. As proposed, a developed curriculum of traditional core environmental and occupational health courses would combine an understanding of how elements such as drinking water, solid waste management, air pollution, agricultural by-products (e.g., pesticides, CAFO's), interact with demographic, economic, and political processes to affect environmental/occupational conditions (e.g., air, water, land and workplace) and human health. Coursework and research would be aimed at furthering scientific understanding of environment, occupation and human health. Interventions would be designed to prevent disease of environmental origin and promote health and safety with a focus on the eastern NC region. Emerging environmental and occupational issues such as high-volume horizontal hydraulic fracturing (fracking) and climate change impacts are areas that could be developed as future research and policy development topics.

3. List all other public and private institutions of higher education in North Carolina currently operating programs similar to the proposed new degree program. Identify opportunities for collaboration with institutions offering related degrees and discuss what steps have been or will be taken to actively pursue those opportunities where appropriate and advantageous.

UNC Chapel Hill, Gillings Global School of Public Health, is an established part of the University of North Carolina system. The DrPH degree is offered at UNC Chapel Hill in the following areas: biostatistics, health behavior and health education, health policy and management, maternal and child health, and nutrition. UNC Chapel Hill enrolls only approximately half of the number of applicants it receives annually and the majority of these are out-of-state/international students with a global perspective. More specifically, the DrPH program in Health Leadership in Chapel Hill receives more than 130 applications per year out of which an estimated 15 gain admission. There is also a PhD offered in the Department of Public Health Policy Management in Chapel Hill. This program admits about only 20 out of 115 applicants. These numbers indicate an unmet need for doctoral training in public health in North Carolina. The proposed DrPH program at ECU will help to meet some of the need.

Furthermore, the focus of the ECU DrPH will be sharply different from the programs at UNC Chapel Hill and will reflect the orientation of the current Department of Public Health mission and MPH program. Each year the Department of Public Health receives over 135 applications from qualified students from North Carolina, who are idealistic and highly committed to improving health in local communities. The DrPH programs aims to attract and recruit students similar to those in the ECU MPH program who predominantly want to receive a public health practice-based education with an orientation on public health issues that impact rural and disadvantaged populations. This defining characteristic of the proposed DrPH program at ECU helps to distinguish, yet compliment the more globally focused public health programs offered at UNC Chapel Hill. The DPH currently has a Memorandum of Understanding (MOU) with UNC Gillings SPH and has gained their support for this proposal.

Additionally, a DrPH in community health is offered through UNC Greensboro, Department of Public Health Education, in the School of Health and Human Sciences. The program is designed to prepare individuals for research careers in community health education at universities, private research institutions and public health agencies. This is a highly selective program that admits only 4-5 students a year. Currently there are 12 students enrolled in the program. The DrPH in PHA at UNC Greensboro is not offered. Also, ECU Department of Public Health is an active participant in the newly formed Academic Public Health Collaborations Group. This group is an alliance of academic public health programs across North Carolina formed to strengthen support for students through the benefits of intercollegiate collaboration.

4. Are there plans to offer all or a portion of this program to students off-campus or online? If so,

a. Briefly describe these plans, including sites and method(s) of delivering instruction.

Currently, the Department of Public Health offers an on-line, distance-education (DE) option for many of the public health courses. These courses make up approximately 40% of the MPH program. Several courses for the proposed DrPH degree will also be available on-line. However, course work for the entire program, will not be offered online. Courses will be available to DrPH students who enter the program without an MPH degree. Less than half of the

courses required for the DrPH will be offered on-line and approval for on-line delivery will be sought.

b. Indicate any similar programs being offered off-campus or online in North Carolina by other institutions (public or private).

The UNC Chapel Hill Executive Doctoral Program in Health Leadership is the only other similar program in North Carolina. It is a three-year, cohort-based, distance program that confers a DrPH in health administration. Annual applications, however, have historically exceeded enrollment capacity. Currently, there are no other colleges or universities in NC or surrounding region that offer the DrPH degree with a concentration in EOH. In terms of geographical proximity, the closest universities offering the DrPH with EOH concentration are George Washington University in Washington, DC, followed by Johns Hopkins University in Baltimore, both private universities. The most closely aligned academic programs identified in N.C., include the UNC Gillings School of Global Public Health. UNC offers PhD. degrees in both environmental epidemiology, and environmental sciences and engineering. Also, UNC heads up the NIOSH supported NC Occupational Safety and Health Education and Research Center, which offers academic degrees in occupational medicine, occupational health nursing, occupational exposure sciences, occupational epidemiology and safety and ergonomics. However, UNC Chapel Hill does not offer the DrPH in either environmental or occupational health (EOH), and therefore, there are no competing interests with their current program offerings. As one of the top ranked schools of public health in the country, application admission at UNC is highly competitive. The DrPH in PHA and EOH would offer an alternative option for both in-state (NC) and out-state students seeking a doctorate degree. Coursework completed at the post graduate level at either ECU or UNC may be transferable (upon review and approval) into the doctorate program.

c. What is the estimated percentage of courses in the degree program that will be offered/available off-campus or online: 40%

d. Estimate the number of off-campus or online students that would be enrolled in the first and fourth years of the program:

First Year Full-Time 0 *Part-Time* 0

Fourth Year Full-Time 0 *Part-Time* 0

Note: If a degree program has not been approved by the Board of Governors, its approval for alternative, online, or distance delivery is conditioned upon BOG program approval. (400.1.1[R], page 3)

5. Estimate the total number of students that would be enrolled in the program during the first year of operation:

Full-Time 6 Part-Time 6

Estimate the total number of students that would be enrolled in the program during the fourth year of operation: Full-Time 15 Part-Time 15

6. Will the proposed program require development of any new courses:

Yes X No
If yes, briefly explain.

The DrPH is a 75 credit hour program of which: 24 credit hours can be transferred from an MPH degree, 15 credit hours for dissertation research, 6 credit hours for field experience, 6 credit hours of core courses common to the two concentration areas, and 24 credit hours of courses from PHA concentration and EOH, respectively. The 24 concentration credit hours include required courses and electives. The following are examples of proposed courses:

PHA and EOH (6 hours courses required for both concentrations)

8XXX Advanced Epidemiologic Methods (3) The course presents an in-depth examination of study design, analysis and interpretation of epidemiologic data. Included in this course is the study of advanced statistical methods as they apply to epidemiologic data (analysis of variance, correlation and regression and logistic regression). The course will consist of lectures, discussion and computer analysis

8XXX Advanced Public Health Research Methods (3) This course covers advanced methods used in public health research.

EOH courses and description:

8XXX Essentials of Environmental and Occupational Toxicology and Diseases: Serves as introductory graduate level course that focuses on multiple aspects of toxicology and disease processes associated with environmental and occupational exposures. Students learn basic terminology and concepts of environmental and occupational toxicology as well as occupational and environmental disease recognition, management and prevention. Emphasis is on scientific foundations rather than on addressing topical issues. The general course orientation is towards basic principles, organ system physiology, diseases and prevention.

8XXX Environmental & Occupational Exposure Assessment: This lecture course is intended to develop an understanding and appreciation of environmental and occupational exposure assessments and its role in providing the tools and information for toxicology, epidemiology, and risk management. The course material introduces the general concepts of first recognizing environmental and occupational exposures to chemicals in human populations and work place and then using sampling techniques to assess exposures.

PHA courses and description:

8XXX Advance Health Economics: *Economic analysis in public health and healthcare; assessment of health programs; cost-benefit & cost-effectiveness analysis, the supply of healthcare services in competitive, monopolistic, and government-regulated markets, and the provision of private and public health insurance.*

8XXX Strategic Planning theory and practice: *This course reviews and critiques theory and research in strategic management, with a concentration on healthcare organizations. Application of theory to design and evaluate public health programs, as well as organization innovation will also be reviewed.*

7. Will any of the resources listed below be required to deliver this program? (If yes, please briefly explain in the space below each item, and state the source of the new funding and resources required.)

a. New Faculty: Yes No

Sufficient faculty in the Department currently exists for the PHA concentration. Two additional faculty members will be added to the EOH concentration. Funding will be paid through a combination of ECU commitment, grant research dollars and MPH tuition supplement fees pending approval.

b. Additional Library Resources: Yes No

c. Additional Facilities and Equipment: Yes No

Approximately \$50,000 per year will be needed to maintain laboratory equipment and supplies.

d. Additional Other Program Support: Yes No
(For example, additional administrative staff, new Master's program graduates student assistantships, etc.)

In year 3 we need 15 student assistantships and one administrative support staff.

8. For graduate programs only:

a. Does the campus plan to seek approval for a tuition differential or program specific fee for this new graduate program? Yes No

b. If yes, state the amount of tuition differential or fee being considered, and give a brief justification.

A supplemental fee of \$100 per credit hour is being considered for public health courses. The rationale is the sharply lower tuition for MPH and public health students at East Carolina University as opposed to other peer institutions.

9. For doctoral programs only:

- a. Describe the research and scholarly infrastructure in place (including faculty) to support the proposed program.

For Public Health Administration (PHA):

1. Number of core faculty at each rank who will be actively engaged in this program. Seven (7) TOTAL: 6 existing: 2 full professors (Mansfield, Novick), 1 associate (Mwachofi), 2 assistant professors (Luo, Winterbauer), 1 clinical assistant (Little); new: 2 assistant professors.
2. Number of core faculty with experience directing theses/dissertations: 3 existing (Mansfield, Novick, Winterbauer).
3. Number of scholarly and professional activities related to proposed degree (with emphasis on the past 5 years): 974.
4. Number of publications related to proposed degree: 207.
5. Number of grants & contracts submitted and awarded related to proposed degree: 119.
6. Invited research presentations outside ECU: 255.
7. Patents/disclosures/copyrights: 0.
8. Participation in scholarly collaborations with other universities, laboratories and centers: 21.
9. Service on related national/international board or committees: 5.

For Environmental and Occupational Health (EOH):

1. Number of core faculty at each rank who will be actively engaged in this program. Eight (8) TOTAL: 6 Existing: 1 full professor (Kelley), 5 assistant professors (Kearney, Barry, Balanay, Richards, Humphrey), new: 2 assistant professors
2. Number of core faculty with experience directing theses/dissertations; Six (6) Total: 6 Existing: 1 full professor (Kelley), 5 assistant professors (Kearney, Barry, Balanay, Richards, Humphrey),
3. Number of scholarly and professional activities related to proposed degree (with emphasis on the past 5 years): 384
4. Number of publications related to proposed degree: 84
5. Number of grants & contracts submitted and awarded related to proposed degree: 76
6. Invited research presentations outside ECU: 137
7. Patents/disclosures/copyrights: 0
8. Participation in scholarly collaborations with other universities, laboratories and centers: 2
9. Service on related national/international board or committees: 10

The DrPH Program will have the necessary faculty resources including senior faculty who have chaired and served on doctoral dissertation committees. Currently, Drs. Novick, Kelley and Mansfield are tenured professors and Dr. Mwachofi is an associate professor with experience serving and chairing doctoral dissertation committees. Dr.'s Kearney, Balanay, Richards and

Humphrey are currently assistant professors whose current levels of productivity align well for their promotion to associate professor with tenure by 2017 when the DrPH program will be enrolling students.

Library resources

Adequate library facilities are available and in place for students and faculty for the proposed DrPH. There is no anticipated future need for additional resources to support the program. Currently, Laupus Library provides access to services, resources and trained professional librarians both within the physical library and also online. Document delivery and interlibrary loan services provide access to library material that is not available online by mailing from the physical collection to users. Interlibrary loan services borrow material from other libraries on behalf of users. Both services are free to students and faculty. Over 70,000 unique journal titles including 139 specifically focusing on public health, roughly 400 health sciences related monographs, and 1300 videos are all available online through Laupus Library. The library also provides online access to 40 research databases and other research tools such as bibliographic management programs like RefWorks. These online tools and resources are accessible from any internet connection.

Instruction and consultations with a librarian are available both online through chat, email, phone, and face-to-face. Library instruction classes, handouts, video tutorials, and subject specific guides are also available through the library website. For each new class of MPH students, reference librarians provide an orientation that includes accessing library materials. Instructional sessions on the use of electronic resources and RefWorks are also offered to students.

Librarians are assigned colleges and/or schools and serve them as a liaison. In this embedded capacity, the librarians develop close working relationships and intricate understanding of the curricula, current research and other aspects of the students and faculty whom they serve. The liaison librarians contribute directly to collection development on behalf of their assigned colleges and schools.

Holdings include:

- Books - 27,370;
- Journals (current print subscriptions & bound titles) – 873;
- Unique e-journals at ECU: 72,170; e-journals specific to public health: 139;
- Subscribed research databases at Laupus: 40;
- Health and medicine videos in Films on Demand: 1,300

Computer resources

Computer resources within the units are adequate for existing faculty. Computing equipment has been included in the start-up costs for new faculty. Faculty computers are typically recycled for student use.

Space and equipment

The Department of Public Health's existing space in the Lakeside Annexes 7 and 8 provides limited space for additional offices. The program expects to obtain additional space as we bring faculty on board as a result of planning discussions, which have included Dean Cunningham and Vice Chancellor Horns who have expressed that the DrPH as a priority for the university. Additionally, a commitment from the Chief Resource Management Officer for the Brody School of Medicine (Gary Vanderpool), expanded space needs of the program are provided (attached).

Currently, space for environmental laboratory is located in the Belk building on east campus. This laboratory space includes foods teaching lab, common prep area for food, water teaching lab, vectors teaching lab, and 4 faculty research labs, for a total faculty research lab space of approximately 7000 ft.² (2000 ft.² research and 5000 ft.² teaching laboratory space).

b. Describe the method of financing the proposed new program (including extramural research funding and other sources) and indicate the extent to which additional state funding may be required.

By program year 3 (2020), total revenue for the program is projected at \$1,128,700. Of this amount, a conservative estimate of grant income is \$500,000. The Department of Public Health had \$908,000 in grant income in 2012-2013 and the Environmental Health Program had \$150,000. An additional \$100,000 is projected to be available from a supplemental tuition fee increase for the MPH Program pending approval. In year 1, (2017), \$200,000 will be available from the graduate school increasing to \$250,000 in subsequent years. The remainder or \$398,143 will be in enrollment growth dollars. In the event of limited enrollment growth dollars, the Department of Public Health will rely on growth of its external funding and examining other sources of university support.

c. State the number, amount, and source of proposed graduate student stipends and related tuition benefits that will be required to initiate the program.

The proposed program is expected to enroll 12 students (4 full-time 2 part-time in PHA; and 2 full-time and 4 part-time in EOH) in Year 1 (\$130,000); 20 students in Year 2 (\$260,000); 30 students in Year 3 (\$390,000) and 30 students in Year 4 (\$390,000). Only full-time students will be eligible for graduate student stipends and related tuition benefits. The costs of these benefits for one full-time student are \$26000 (stipend) + \$4500 (tuition).

10. List the names, titles, e-mail addresses and telephone numbers of the person(s) responsible for planning the proposed program.

Faculty from the Department of Public Health has primary responsibility for planning the proposed program (see table below). Campus partners included in the planning process will consist of faculty from the Departments of Pediatrics and Family Medicine and School of Communication, Department of Environmental Health Sciences at ECU.

Additionally, highlighting the practice-oriented nature of the proposed program, an advisory group will be assembled from the Department of Public Health, Community Advisory Board, which consists of practice partners drawn from a wide range of community health agencies.

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Lloyd Novick, MD	Chair & Professor	novickl@ecu.edu	252-744-4065
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Huabin Luo, PhD	Asst. Professor	luoh@ecu.edu	252-744-5690
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Don Chaney, PhD	Chair & Assoc Prof.	chaneyj@ecu.edu	252-737-4942
Jo Anne Balanay, PhD	Asst. Professor	balanayj@ecu.edu	252-737-1474
Charles Humphrey, PhD	Asst. Professor	humphreye@ecu.edu	252-737-1479
Stephanie Richards, PhD	Asst. Professor	richardss@ecu.edu	252-328-2526
Paul Barry, MD	Asst. Professor	barryp@ecu.edu	252-744-2070

This request for authorization to plan a new program has been reviewed and approved by the appropriate campus committees and authorities.

Chancellor _____ **Date** _____