

**NEW GRADUATE DEGREE OR GRADUATE CERTIFICATE
FORM D**

UNIT PREPARES IN QUADRUPLICATE
Route as indicated below under approvals. Return to the Registrar's Office once all signatures have been obtained.

Date: _____

***Allow up to one year for the process to be completed for a certificate, and 18 months for a degree.**

(Name of individual initiating Graduate Degree or Graduate Certificate)

(Title, position, telephone number)

(Email address)

(Department/Division/Program)

Note: Proposals for new graduate degrees or graduate certificates need to follow an approved format. Please call the Office of Graduate Studies and ask for an outline. Revisions of graduate degrees and some new certificates also may need state approval, depending on the extent of changes proposed. Please consult the Office of the Provost for advice prior to initiating this form.

Attach the following required documents:

1. Executive Summary.
2. Program Proposal (in the approved format).
3. Catalog Description (to include program curriculum).
4. Graduate Program Projected Costs (only for new degrees).
5. Library Impact Statement.

Does this new degree affect any existing program? Yes No If yes, attach statement.

Proposed date to admit new students: Term _____ Year _____

Required Signatures:

Department Chair	<u><i>Kristine J. Jolley</i></u>	Date	_____
College Curricula Committee	_____	Date	_____
College or School Dean	<u><i>Tracie C. Collier, MD, MPH, MHCDS</i></u>	Date	_____
Dean of Library Services	_____	Date	_____
Office of the Registrar—Catalog	_____	Date	_____
FS Graduate Committee	_____	Date	_____
Dean of Graduate Studies	_____	Date	_____
FS Curricula Committee	_____	Date	_____
Office of the Provost	<u><i>Paul Z. Clark</i></u>	Date	02-12-2021
Faculty Senate	_____	Date	_____
Board of Regents	_____	Date	_____

Additional Approvals for Degrees:

Board of Regents	_____	Date	_____
Council of Graduate Deans	_____	Date	_____
Academic Council of Higher Education	_____	Date	_____
Higher Education Department	_____	Date	_____
State Board of Finance	_____	Date	_____

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Entered Catalog

For Registrar's Office ONLY:

Copies Mailed

Executive Summary - Preliminary Review
Doctor of Philosophy (PhD) Degree in Health Equity Sciences (HES)
College of Population Health, UNM
February 18, 2020

The University of New Mexico’s College of Population Health (COPH) is proposing a new cooperative PhD degree in “Health Equity Sciences” (HES) in partnership with New Mexico State University’s College of Health and Social Services. The new degree will capitalize on each institution’s strengths in order to develop a wider range of educational and research opportunities within the state. The PhD in HES will integrate the rich history of public health with the newer discipline of population health and the human and social sciences, and provide graduates with a competency-based degree that will prepare them to become the health leaders, managers, and researchers of tomorrow. The new degree will “advance health and health equity across New Mexico” (and beyond), which is consistent with the vision of the Health Sciences Center’s Strategic Plan 2018-2023, as well as the goals in the University of New Mexico’s 2019-2020 Strategic Plan. This PhD is vitally important because one of New Mexico’s greatest barriers to improved health and well-being is that the state is data-rich but information-poor, where data resources are not translated into “real-time” systems reform. A PhD in HES addresses this need for formal advanced training of health researchers, professionals, and advocates in epidemiology/socio-epidemiology and biostatistics, socio-behavioral intervention, prevention and evaluation sciences, community based participatory research, global health systems and policy equity sciences, and the translation of research results into interventions, health care system reform, and policies for improved health equity.

The new PhD will build upon the existing degree programs offered through the COPH, such as the accredited Master of Public Health (MPH) degree which has been offered since 1994, and the Bachelor of Science in Population Health (BSPH) degree started in 2015. This PhD offers unique training within the University and the state, and will attract students from a wide range of academic backgrounds because of the interdisciplinary nature of public and population health. The PhD in HES will be a 66-credit hour program of study, comprised of core and concentration course work and 18 dissertation hours. The program is designed to be flexible and responsive to the needs of individual students, with five concentrations including: Epidemiology, Applied Statistics, Health Education with colleagues from UNM’s College of Education, Community Based Participatory Research (CBPR), and Global Health Equity (including health systems and policies).

The curriculum includes a core in advanced research methods, applied research skills, doctoral seminar, and concentration courses. Research methods include advanced epidemiology/biostatistics, rigorous quantitative and qualitative methods in prevention, intervention, and health policy research. Training will be based in translational, participatory, theory-driven and culturally-centered designs for diverse populations. Skill-building courses include data analysis software packages (SAS, STATA, etc), among others. Doctoral seminars will be student-driven journal clubs and employ diverse case studies (drawing from our rural/frontier, tribal, & U.S.-Mexico border partners). Concentration courses are tailored with students choosing their pathway with approvals by an advisor from NMSU and/or UNM, and the student’s doctoral committee. After completing 25 credits, students will take a comprehensive exam and present their dissertation proposal.

Table 1: Proposed Ph.D. in Health Equity Sciences

Table 1: Proposed Ph.D. in Health Equity Sciences						
	CORE Classes					
	Advanced Research Methods	Doctoral Seminars	Skills Building	Concentrations and Dissertation	MPH Credit Transfer	Total Credits
Required	3	3	3	12		21
Elective	15				12	27
Dissertation				18		18
Total credits	18	3	3	30	12	66

Evidence of Need and Duplication: The health sector continues to grow with no signs of declining. Alongside this growth is an unprecedented opportunity and need to develop population-based health solutions that can address the growing burden of chronic conditions. As the nation enrolls 32 million previously uninsured individuals, there is an urgent need to build evidence on what works, for who, under what conditions, and at

what cost. NM is positioned to be an innovator in this arena by building this evidence base and preparing researchers, administrators, managers, and policy and population health data analysts.

According to the Bureau of Labor Statistics (2019), between 2018-2028, the demand for public and population health personnel will outpace most other professions. For example, the demand for health system administrators and biostatisticians will grow 17.6% and 30.7% respectively – a rate that exceeds the growth of the overall job market by 3¹/₂ to 6 times. In addition, a 2015 NM Department of Workforce Solutions Report showed the largest gains in employment will come from health services, with a 10.5% increase in jobs since 2008. Further, shortfall projections developed in 2008 (by the Association of Schools of Public Health) there is already a large shortfall of public health workers. At the time, it was estimated that 250,000 additional public health workers would be needed by 2020, which equated to three times the current number of graduates for a period of 10-15 years, including doctoral-level researchers.

Given the heterogeneity with our unique populations in NM, and considering the challenges and cultural assets, the timing for this degree is long overdue. This is an unprecedented period of change and opportunity for growing the public/population health workforce. Health reforms at the national, state and tribal levels have shifted towards value based health systems that reward innovation and implementation of evidence-based programs, innovative care delivery models, and community interventions that accelerate prevention and tackle the social determinants of health. A new cadre of PhD-trained professionals with applied research experience is needed for collecting, analyzing, and translating population health data; as well as evaluating multi-level health care and policy interventions that advance health equity for diverse communities. The PhD in HES will build a robust research workforce for working with other stakeholders to advance systems and policy change. The PhD at UNM (in cooperation with NMSU) will fill a critical gap in an under-represented workforce in the South, U.S.-Mexico border region and Mountain West health care, public health systems and health policy pool. In a 2019 survey of UNM's current MPH students and alumni, 63% indicated serious interest in a PhD, with specific interest in: analytics (24.5%); community health and health systems/policy (16%); global (12%); population health (12%); and Native American research (10%). Potential employers include: universities, public agencies, private insurance and accountable care organizations, for-profit and non-profit hospitals and health care systems, local/state/tribal governments, non-profit organizations, rural and/or U.S.-Mexico border public health offices, and Albuquerque Area and Navajo Tribal Epidemiology Centers.

There are no similar programs offered within NM. The WICHE regional graduate program opportunities are few, distant, and limited to general public health doctoral programs, or designed specifically for clinical practitioners such as nurses and laboratorians.

Inter-Institutional Collaboration and Cooperation: The new degree will be a cooperative program with NMSU. The two institutions will have common admission standards but conduct admission separately. The admitting university will be the student's "home" for the majority of their core requirements and comprehensive exams. Students will have the ability to cross-enroll at the partner university for selected classes, and the option to select a concentration and complete their dissertation at the partner university. Their dissertation chair will be from their home institution, but students will have the option to work with a primary research mentor from the partner school that will serve as co-chair to their committee.

Evaluation and Assessment: Each course has specific learning objectives, with student progress measured by successful completion of the course. Doctoral students must pass both a comprehensive examination after completing 24 credits from advanced core courses and their doctoral examination after completing their dissertation. Graduates and employers will be surveyed one-year after completion of degree to determine employment status and satisfaction with doctoral level training.

Projected Enrollment and Costs The faculty are ready to offer the new program, and pending approval, will start recruiting immediately. The plan is to start with 5 doctoral students initially. Once the PhD-HES is well established, we anticipate having over 20 students enrolled in the program, with 4+ PhD degrees being granted each year. It will take 4 to 5 years to establish the program, and at least 4 years before reaching 20 students in residence, however not all of these students will be full-time.

The anticipated yearly revenue as the program ramps up is as follows: year 1 = \$25,779, year 2 = \$51,559, year 3 = \$77,339, and year 4 = \$94,525. Projected start-up costs will include new staff support at 1.5 FTE who will assist with marketing, admissions, tracking of student progress, and processing of fellowships.

Todd W Hynson

From: Paul B Roth
Sent: Thursday, February 20, 2020 7:01 AM
To: Amy J Levi
Cc: Julie Coonrod; Chamiza Pacheco de Alas; Todd W Hynson; Tracie C Collins
Subject: Re: Request to proceed with the development of the PhD program at the College of Population Health

Yes. Please proceed

Sent from my iPhone

On Feb 19, 2020, at 4:17 PM, Amy J Levi <AmyLevi@salud.unm.edu> wrote:

Please let us know if the College of Population Health, under the direction of Dr. Tracie Collins, may proceed with the development of a proposal for the PhD program described in the attached Preliminary Review.

Thank you!

Amy

Amy Levi, PhD, CNM, WHNP-BC, FACNM, FAAN
Vice Chancellor of Academic Affairs for the Health Sciences Center
Leah L. Albers Endowed Professor of Midwifery
University of New Mexico
Albuquerque, New Mexico
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505-272-5598

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NEW GRADUATE PROGRAM APPLICATION

A. General Information

Institution: University of New Mexico - College of Population Health

Name and Title of Contact Person: Tracie Collins MD, MPH, MHCDS
Dean and Professor

Email of Contact Person: TCCollins@salud.unm.edu

Name of Proposed Program: Ph.D. in Health Equity Sciences (HES)

Name of Sponsoring Department, School, and/or College: College of Population Health

Level of Proposed Program: Doctoral Degree

Estimated Time to Complete Proposed Program: 4-6 years full time

Campuses to offer this degree program: Albuquerque (North Campus) Health Sciences Center

All Program Format(s): *(standard, distance education, evening, weekend and/or other)* – Standard, distance education, and evening

Anticipated Start Date: Fall 2021

Proposed CIP code

B. Program Curriculum

Collaboration Spotlight

Education & Training

UNM and NMSU share a long history of collaborative public health work in research, training, education, leadership, and service dating back to the mid-1900's. The partnerships have included joint educational activities and research, as well as exchanges between the two universities for undergraduate and graduate students.

- UNM and NMSU are the only schools in NM offering public health education for undergraduate and graduate levels.
- NMSU lent its expertise to the development of UNM's Bachelor of Science in Public Health capstone class and project, since it has had a Bachelor's of Community/Public Health degree since the late 1970s.
- Both programs advise potential MPH students about the options at both schools (e.g. epidemiology vs border health).
- Traineeships sponsored by the Region 6 Public Health Training Center allow students to participate in exchange experiences at both schools.
- UNM's MPH students can take online classes through NMSU, and NMSU's MPH students can take in-person classes at UNM. These credits easily transfer, since both programs have the same accreditation standards, and apply to the degree they are working toward.
- NMSU offers an undergraduate and graduate minor in US-Mexico Border health and UNM offers a 400/500 level US-Mexico Border Health course.

Program Description (as listed in catalog)

The University of New Mexico's College of Population Health and New Mexico State University's College of Health and Social Sciences are proposing a cooperative Doctor of Philosophy in Health Equity Sciences (Ph.D.-HES). The doctorate program brings together two of New Mexico's most prestigious academic institutions to offer a unique and cutting-edge opportunity for doctoral-level study.

UNM and NMSU share a long history of collaborative public health work in research, training, education, leadership, and service dating back to the mid-1900s. Much of this work has focused on US-Mexico Border public health practice, services, and policy development, including joint educational activities and research, as well as exchanges between the two universities for undergraduate and graduate students. This longstanding partnership has set the stage for the collaborative doctoral program.

The program capitalizes on each institution's strengths. The cooperative structure gives students access to faculty and institutional resources on both campuses, creating a more comprehensive range of educational and research opportunities within the state. Both universities have comparable bachelor's degree programs (Public Health at NMSU and Population Health at UNM), and both have Master of Public Health degree programs; the Ph.D. in HES is a natural extension of these two programs.

The new doctorate will integrate the rich history of public health, with the newer discipline of population health, and the human and social sciences to provide graduates with a rigorous competency-based degree. The advanced comprehensive training will prepare graduates for positions in various settings - such as local, state, federal, and global governmental and non-governmental agencies, public health and social justice organizations, health care provider organizations, and higher learning institutions.

2020 marks a watershed year for health regionally, nationally, and globally. The current COVID-19 pandemic has highlighted the disproportionate impact of health and social crises upon underserved and marginalized populations, many of which experience historical trauma that becomes exacerbated during times of duress. According to the NM Department of Health, our own New Mexican Native community is experiencing death from COVID-19 at rates 19 times that of all other populations combined— a chilling example.

The death of George Floyd and the many others who came before him illuminate once more the pervasiveness of structural racism within our culture. The demand for learning, the desire to help, and the aspiration for research competencies and knowledge to address the dual pandemic of COVID-19 and racism is high. The need for this degree is urgent.

At the end of the program, graduates will have the skills and experience necessary to address these growing and complex problems that underlie health and healthcare inequities, as well as emerging future threats.

Collaboration Spotlight

Collaborative ventures in border health disparities remain a lynchpin for cross-university research projects.

US-Mexico Border Health Centers of Excellence Consortium

- A four-border state partnership focused on bridging evidence with practice in the delivery and training of the health professional workforce from prevention and primary care to treatment.
- One of several successful outcomes of the consortium included a faculty forum with participants from both UNM and NMSU, which engaged over 100 public health stakeholders. Participants discussed and shared community-based practices and evidence-based programs to tackle behavioral health and chronic conditions in the border region.

NM Cares Health Disparities Center (UNM) & Southwest Institute for Health Disparities Research (NMSU)

- From 2010 to 2015, the two centers co-sponsored several community-academic training sessions, such as training for researchers, students, and community health workers.
- One of these trainings took place as part of the Border Health Disparities Conference hosted by NMSU. During the conference, over 50 participants completed a two-part training developed by promotores de salud on research ethics and best practices in bidirectional community-based participatory research.

Graduates will acquire the skills to address complex health problems by:

- developing a strong understanding of culturally competent and culturally humble community-based research design and evaluation
- becoming skilled in diverse research methodologies (quantitative and qualitative) and statistical analyses
- identifying new synergies that leverage resources and transdisciplinary science by integrating public health with population health and social sciences perspectives
- conducting research to assess political-structural and social determinant inequities among diverse and underrepresented populations in the state, the border, southwest region, tribal communities, the U.S., and globally
- advancing new lines of intervention research, policy development, and service that will contribute to improved health equity and health status within the state, the border, southwest region, tribal communities, the U.S., and globally.

This will be the first program in the nation to offer a doctoral-level degree in Health Equity Sciences (HES).

Program Curriculum (as listed in catalog)

The Ph.D. in HES will be a 66-credit hour program of study broken down into core and concentration coursework and dissertation hours. It will be flexible and responsive to the needs of individual students with multiple concentration options to choose from at UNM, NMSU, or a jointly run concentration between the two institutions in Biostatistics.

The core curriculum will be similar at both institutions and includes advanced research methods, applied research skills, a doctoral seminar, and concentration courses. The core features classes in advanced epidemiology and biostatistics that emphasize rigorous quantitative and qualitative research methods, as well as classes in prevention, intervention, and health policy research. Training will be based in translational, participatory, theory-driven, and culture-centered designs for diverse populations. Skill-building courses include data analysis software packages (SAS, STATA, AtlasTi, etc), among others. Doctoral seminars will be student-driven journal clubs and employ diverse case studies (drawing from our rural/frontier, tribal, & U.S.-Mexico border partners).

The admissions criteria (see below) will be the same across the two institutions to foster reciprocity through the use of the State's Cross Enrollment Agreement. Students will choose either NMSU or UNM as their degree-granting institution (their "home" institution) to which they will apply and complete core coursework predominantly at that institution. Participation in research projects will commence during the first year with mentorship provided by faculty at either institution. After 48 credit hour requirements, students will take a comprehensive exam at their home institution after which (if completed successfully), they will begin work toward their dissertation. The comprehensive examinations will be similar for the core material. However, since the two universities have different concentrations, the concentration portion of the examination will differ depending upon the concentration the student selects.

Students will also select a concentration from either institution at that time, and the balance of coursework will be in fulfillment of that concentration.

The dissertation committee chair will be a faculty member from the degree-granting (home) institution; however, students may select a co-chair who serves as an additional mentor from the other institution if it makes sense for their chosen path. At least two committee members (chair and one other) will be from the degree-granting institution. Faculty at either institution may opt to have a joint appointment, but this is not required. An oral defense will follow the written dissertation.

The expected length of time is four years to complete, during which students will hold graduate assistantships and be involved in research and teaching. Students will have the opportunity to apply for a variety of graduate assistantships, including research assistantships. Many will be graduate assistantships supporting the undergraduate courses. Our BSPH student differential will be used to fund these graduate assistantships. We currently do not have enough master's level students to fill our needs for assistantships in all of our undergraduate and graduate courses. The doctoral students will have the needed training in more specialized topics such as epidemiology to assist with those classes at the master's level.

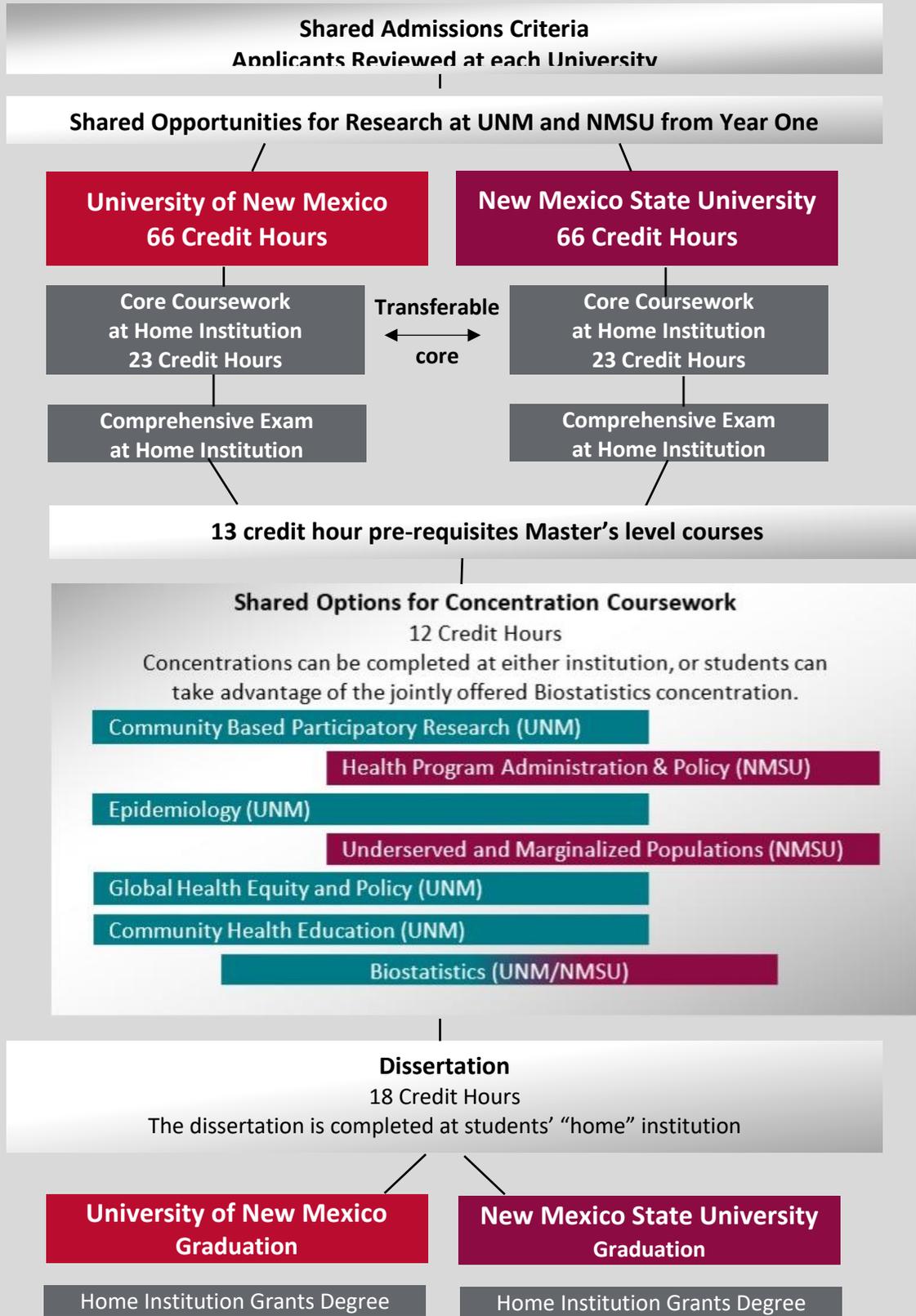
Ph.D. in Health Equity Sciences - Credit Hour Requirements

The program focuses on full-time students who already have a master's degree from a CEPH-accredited MPH program. The program will also accept students with a master's degree from other disciplines. However, in some instances, students with a bachelor's level degree will be considered for admittance. These students will be required to take an additional 13 MPH-specific credit hours. The Biostatistics concentration also has prerequisite requirements for students with a non-statistics degree.

	Masters Level Courses	Advanced Research Methods	Doctoral Seminar	Skill Building	Concentration & Dissertation	TOTAL Credits
Bachelor Students	13 Credit Hours	6 Required 12 Elective 18 Total	3	2	12 Concentration 18 Dissertation	66
Post Graduate Other Masters	Up to 13 hours can be applied to total Ph.D. requirement	6 Required 12 Elective 18 Total	3	2	12 Concentration 18 Dissertation	66
MPH Degrees	13-18 hours can be applied toward total Ph.D. requirement	6 Required 6-12 Elective 18 Total	3	2	12 Concentration 18 Dissertation	66

Master's Level Prerequisites (13 credits)		
Course	Title	Credits
PH 501	Determinants of Health Equity in Public Health	4
PH 502	Epidemiology and Biostatistics I	4
PH 538	Epi and Biostats Lab	2
PH 552	Interventions in Health Equity	3
<i>Total</i>		13
Biostatistics Concentration Prerequisites (if entering with non-statistics degree)		
STAT 561	Probability and its Applications	3
STAT 553	Statistical Inference	3

Ph.D. in Health Equity Sciences
*A collaborative degree program offered by
the University of New Mexico and New Mexico State University*



**Advanced Research Methods Core Courses for UNM students
(6 credits quantitative methods required plus 12 additional credits = 18 credits total)**

Course	Title	Credits
Required for ALL concentrations (3 credits)		
PH 539	Advanced Biostatistics or EDPY 603 Applied Statistical Design and Analysis or NMSU's CEP 636 Advanced Statistics	3
ALL concentrations must select one option from the following four (3 credits)		
STAT 574	Biostatistical Methods: Survival Analysis and Logistic Regression Multivariate Analyses	3
PH 537	Advanced Epidemiologic Methods	3
Nursing 613	Mixed Methods Research	3
PH 684	Advanced Health Policy Analysis	3
BIOSTATISTICS Concentration Students - REQUIRED Courses (6 credits)		
EDPY 604	Multiple Regression Techniques as Applied to Education	3
EDPY 608	Multilevel Modeling	3
All concentrations must select four options (12 credits) from the following EXCEPT BIOSTATISTICS CONCENTRATION – select two options (6 credits)		
PH 556	Community-Based Participatory Research	3
PH 558	Intervention Research with Marginalized Populations	3
C&J 604	Qualitative Research Methods or CRP 513 or LLSS 605 or Nursing 607	3
EDPY 515	Survey and Questionnaire Design and Analysis Sampling Theory and Practice or STAT 572	3
STAT 556	Advanced Statistical Inference I (UNM)	3
STAT 576	Multivariate Analysis	3
PSY 604	Latent Variable Modeling (UNM)	3
PSY 605	Advanced Latent Variable Modeling (UNM)	3
PH 660	Special Topics	3

**Skill Building Courses
(2 credits total)**

Course	Title	Credits
Required for all concentrations (1 credit)		
PH 511	Dissertation proposal writing	1 credit
Required for Epidemiology concentration (1 credit)		
OILS 583	Teaching Methods (registered as OILS 583 Graduate Teaching)	1 credit
All concentrations must select two options from the following four (2 credits) EXCEPT EPIDEMIOLOGY CONCENTRATION which will select one additional option		
OILS 583	Teaching Methods (registered as OILS 583 Graduate Teaching)	1 credit
PH 593	Grant writing training (registered as PH 593 Independent Study)	1 credit
PH 660: Special Topics	Qualitative Analytic Packages (NVivo, AtlasTi, etc.) Policy Implementation Research and Evaluation Research Health Informatics Quantitative Statistical packages (SAS, R, SPSS, Stata)	1 credit

Doctoral Seminars (3 credits required for all concentrations)		
Course	Title	Credits
PH 690	Doctoral Seminars/Journal Club (topics to be determined)	3 credits (1 credit per semester)

COMPREHENSIVE EXAM REQUIRED AFTER 48 CREDITS AND INCLUDES THE PROPOSAL DEFENSE

Doctoral Dissertation: (18 credits required for all concentrations)		
PH 699	Dissertation Hours	18 Credits

FINAL ORAL DISSERTATION DEFENSE AND PRESENTATION REQUIRED FOR DOCTORAL DEGREE

Concentration Descriptions

Biostatistics (Shared UNM and NMSU)

This shared concentration will provide instruction on using advanced statistical concepts and procedures to measure health-related constructs and analyze data sets ranging from small-scale research project outputs to large population-scale epidemiological databases. Students successfully completing this program will be able to: (a) quantitatively address a novel or complex problem by developing an innovative statistical methodology or adapting existing methods to a new problem; (b) demonstrate mastery of advanced statistical theory and applications; (c) understand and implement innovative statistical approaches emerging in the literature to biomedical and public health or social issues; (d) communicate the results of statistical analyses to individuals with varying degrees of statistical knowledge; (e) recognize strengths and weaknesses of proposed approaches, including alternative designs, data sources, and analytic methods; (f) determine the data best suited to address public health or social issues, program planning, and program evaluation; and, (g) contribute to the body of knowledge in the field of biostatistics by submitting an article for publication in a peer-reviewed journal.

Community Based Participatory Research (CBPR) Concentration (UNM)

The concentration in Community Based Participatory Research (CBPR), alternatively called community-engaged research (CEEnR), is based on a philosophical foundation of community capacity building, empowerment, and participatory approaches to research to promote social justice and equity in health. The concentration emphasizes a full range of research methods, including indigenous, decolonizing, and critical methodologies. Students will complete course work in the conceptual and theoretical foundations of CBPR; in rigorous quantitative, qualitative, and mixed methods research; in challenges to traditional power inequities in research design and implementation, in bidirectional participatory intervention development based on psycho-social-structural theories and evaluation, and special topics of their choosing. Local, national, tribal, and global research opportunities are available for doctoral students with faculty and community partners, across the life course, across geographic and social identity diversities, and across distinct health issues and social-political contexts. Some courses are shared with the Community Health Education Concentration.

Community Health Education Concentration (in collaboration with UNM College of Education Program in Health Education)

The concentration in Community Health Education emphasizes a strong foundation in psycho-social theory and methods so that students establish a specialty focus on community health intervention and health education research, and critical thinking in advancing health equity built on the science of cultural alignment, community methodologies, social determinant pathways to health, geographic and regional diversity, and evidence-based practices and practice-based approaches. The concentration provides students with a unique research skill-set that builds on capacity to maximize the communities' research potential as well the students' by building bi-directional research and leadership skills anchored in the principles of social justice, health

equity and generational sustainability grounded in local epistemologies with communities. Some courses are shared with the CBPR concentration.

Epidemiology Concentration (UNM)

The concentration in epidemiology provides rigorous training in epidemiologic methods and educates students to become independent, productive, and creative research scientists in the field of epidemiology. Graduates of this program will be prepared to assume prominent positions in research, teaching, or health administration and are trained to address some of the most urgent public health issues facing us today.

Global Health Equity and Policy Concentration (UNM)

The concentration in Global Health Equity (GHEP) prepares students in multi-disciplinary research competencies and skills to tackle complex global public health issues that can be applied to their research, practice and policy careers. Based in deep roots in the communities we serve and in principles of social justice and human rights, we encourage transdisciplinary course work in a wide variety of global health-related areas such as: trauma related migration, international drug and sex trafficking, political and economic determinants of health, comparative primary care systems, design and evaluation of prevention strategies from a social justice approach (HIV/AIDS, obesity, vaccines, maternal and child health), community resiliency interventions to tackle violence, causes of diseases and health conditions including poverty, colonialism and neoliberalism. Students will also engage in virtual and/or place-based observatories for conducting independent and mentored research, in support of effective and evidence-based health policy, planning, decision-making and action in public health and health systems.

Health Program Administration and Policy (NMSU)

This concentration will provide instruction on the administration of policy and the management and organization of health programs and agencies of varying sizes. By using a systems approach, the intersectional factors that influence the functioning of such organizations will be identified and analyzed. Specific attention will be given to administrative structures, operations, financial management, and quality assurance in public health departments, hospitals, multi-institutional systems, integrated health systems, and strategic alliances.

Underserved and Marginalized Populations (NMSU)

This concentration will provide a survey of underserved and marginalized populations found regionally, nationally, and globally with specific focus on the economic, social, cultural, and environmental factors that contribute to disparity. These factors continue to impact these groups due to a history of discrimination, exclusion, and marginalization. Students will learn this history and consider solution-focused strategies that encourage equity, agency, and empowerment.

Elective Courses Specific to Concentration To Be Selected in Consultation with Advisor and Committee: Each course is not mutually exclusive to the focus area, but we have depth in each of these areas. (12 credits required)		
Concentration	Title	Credits
Biostatistics (joint UNM/NMSU) (choice of courses determined with faculty mentor)	PSY 650: ST: Analysis of Data (UNM) PSY 650: ST: Hierarchical Linear Modeling (UNM) PSY 650: ST: Meta-Analysis (UNM) PSY 650: ST: Quasi-Experimental Design (UNM) A ST 6XX: Linear Models (NMSU) A ST 6XX: Bayesian Theory (NMSU) A ST 6XX: Time Series (NMSU) A ST 6XX: Computational Statistics (NMSU) REQUIRED PH 630: <i>Biostatistics Interdisciplinary Capstone Course (6 credit hours over two semesters)</i>	12 Including the two-semester Capstone Course

<p>Community Based Participatory Research (UNM)</p> <p>(choice of courses determined with faculty mentor)</p>	<p>PH 556: Community-Based Participatory Research (required)</p> <p>PH 558: Intervention Research with Marginalized Populations</p> <p>Nursing 613: Mixed Methods</p> <p>PH 651: Public Health Research and Social Justice</p> <p>HED 560: Community Health Perspectives: Critical Dialogue with New Mexican Communities with New Mexican Communities</p> <p>PH 657: CBPR Research Lab (up to two semesters)</p> <p>PH 690: CBPR Seminar</p> <p>Other elective courses available through the Race and Social Justice Institute and other related departments</p>	<p>12</p>
<p>Community Health Education (UNM)</p> <p>(choice of courses determined with faculty mentor)</p>	<p>HED 506: Health Education Theory</p> <p>HED 571: Advanced Community Health Research</p> <p>HED 582: Advanced Multicultural Health</p> <p>PH 651: Public Health Research and Social Justice</p> <p>HED 576: Evaluation and Measurement</p> <p>HED 560: Community Health Perspectives: Critical Dialogue with New Mexican Communities</p> <p>HED 598: Directed readings in HED</p>	<p>12</p>
<p>Epidemiology (UNM)</p> <p>(choice of courses determined with faculty mentor)</p>	<p>PH 524: Social Epidemiology</p> <p>PH 528: Infectious Disease Epidemiology</p> <p>PH 529: Introduction to Developmental Epidemiology</p> <p>PH 531: Perinatal Epidemiology</p> <p>PH 621: Special Topics in Advanced Epidemiology (topics could include those in the list below). One will be offered each semester and schedule will be provided on the website:</p> <ul style="list-style-type: none"> • Advanced Analytic Epidemiology • Evaluating Epidemiologic Literature • Cancer Epidemiology <p>GEOG 581L: Introduction to GIS for Graduate Students</p> <p>Other elective courses available through other UNM colleges and departments</p>	<p>12</p>
<p>Global Health Equity and Policy (GHEP) (UNM)</p> <p>(choice of courses determined with faculty mentor)</p>	<p>PH 681: Global Health Systems and Policies</p> <p>PH 554: Health Policy, Politics and Social Equity</p> <p>PH 582: Global Indigenous Health</p> <p>PH 583: Adv Topics in Health Sector and Globalization</p> <p>PADM 562: Health Governance and Global Perspectives</p> <p>PH 660: Special Topics in GHEP (topics could include those in the list below). One will be offered each semester and schedule will be provided on the website:</p> <ul style="list-style-type: none"> • Transnational Migration, Health and Trauma • Environmental Health Policy • Global Health & Political Epidemiology • Gendered Justice, Intersectionality and Leadership in Global Health 	<p>12</p>

	<ul style="list-style-type: none"> • Global Health Observatory Data (web and in-person based) Other elective Courses available through UNM colleges and departments	
Health Program Administration and Policy (NMSU)	Courses available at NMSU	12
Underserved and Marginalized Populations (NMSU)	Courses available at NMSU	12

Shared Admissions Criteria:

The admissions criteria will be the same across the two institutions to foster reciprocity that allows students to enroll in courses at either university. Students will choose either NMSU or UNM as their degree-granting institution (their "home" institution, to which they will apply) and complete core coursework predominantly at that institution. The admission criteria include the following:

1. Applicants must hold a graduate master's degree, with preference given to applicants holding an MPH degree from a CEPH-accredited program or other health- or medical-related degree. However, in some instances, students with a bachelor's level degree will be considered for admittance.
2. Documented experience in the form of research, job experience, completion of a master's thesis, and/or other similar experience including work in non-governmental agencies (NGOs)
3. GPA of 3.0 or higher
4. One graduate-level coursework in statistics or biostatistics.
5. Two-page Statement of Interest describing professional experience, research interests, career aspirations, and experiences that have prepared the applicant for doctoral work.
6. Three letters of recommendation: one from a faculty member who has worked with the applicant in a research capacity, one from a faculty member who taught a class attended by the applicant, and one from an individual of the applicant's choosing.
7. Preference will be given to applicants who have submitted a thesis during their master's coursework or have completed a comparable extended project or publication.

Is there a certificate embedded in the degree program? If so, list certificates and courses required. **NO**

If this is a master's degree, does it articulate to a doctoral degree program? If yes, to which doctoral program? **N/A**

C. Assessment

Describe your institution's plan for periodic evaluation of program effectiveness. Include criteria that will be used to determine effectiveness. Max 500 words.

Each course has specific learning objectives, with student progress measured by the successful completion of the course. Doctoral students must pass a comprehensive examination, available after completing 48 credits, and then their doctoral examination after completion of their dissertation.

Also, one year after graduation, alumni will be surveyed to determine employment status and the types of jobs graduates secure. The survey will also include questions about workforce preparedness and how they are applying their skills in their position, as well as questions about possible gaps in programming or suggestions for future programming.

D. Need

The proposed program must meet one or more specified needs within the state or region. Clear and convincing evidence must be provided of the reality and extent of such need. Max 500 words.

Evidence of need might include results of employer surveys, current labor market analyses and projections, or long-term need projections prepared by a relevant professional organization. Although academic and research interests of institutional faculty may be met through implementation of the proposed program, such interests by themselves are unlikely to persuade the NMHED and/or the State Board of Finance of need for the program.

In 2008 the Association of Schools and Programs of Public Health (ASPPH) and the Health Resources and Services Administration (HRSA) estimated that 250,000 additional public health workers would be needed by 2020, which at the time equated to three times the current number of graduates for 10-15 years, including doctoral-level researchers. According to the Bureau of Labor Statistics (2019), between 2018-2028, the demand for public and population health personnel will outpace most professions. For example, the need for health system administrators and biostatisticians will grow 17.6% and 30.7%, respectively – a rate that exceeds the growth of the overall job market by 3¹/₂ to 6 times, respectively. The Bureau of Labor Statistics also states that employment of epidemiologists is projected to grow 5 percent from 2019 to 2029, faster than the average for all occupations. Epidemiologists are likely to have good job prospects overall. In recent years, the New Mexico Department of Health has found it difficult to retain doctorally trained epidemiologists who are familiar with the state's diverse and unique health issues.

Also, the New Mexico Department of Workforce Solutions *2019 State of the Workforce* report indicates that the most significant gains in employment from recent years have come from the education and health services sector. From 2014-2018 this sector saw a 12% increase in jobs (based on average yearly growth). In 2017, the healthcare and social assistance sector comprised the largest employing industry in New Mexico at 17.3%, outpacing the #2 employing industry by nearly 6%. Growth projections show that the health care and social assistance sector in New Mexico will grow by 19.5% over the 2016-2026 time period, necessitating 25,960 new employees. This growth at the national, regional, and local level translates to a shortfall of health professionals.

There is also demand within UNM's current students and alumni. In a 2019 survey of UNM MPH students and alumni, 31 indicated serious interest in a Ph.D., with a specific interest in analytics (24.5%); community health and health systems/policy (16%); global (12%); population health (12%); and Native American research (10%).

This state faces enormous health challenges, including an aging population that is underserved and often disconnected, with low literacy levels, and experiencing many social determinants leading to poor health outcomes. We also face excess rates of substance abuse, teen pregnancy, food insecurity, adverse childhood events, and chronic conditions such as diabetes and hypertension. The cultural and ethnic diversity, coupled with much of the population living in rural or frontier areas, presents unique challenges to those working to improve the health of the state's residents. The need for health professionals schooled in the principles of equity and social justice is urgent.

Doctoral students in this program will learn about these health challenges, develop skills to recognize the commonalities of such challenges locally, regionally, across the nation, and around the globe, and serve as leaders in creating solutions that have the potential to work in individual communities. Doctoral graduates are also vital to the development of sound health policies and the analysis of existing policies.

NM can be an innovator in this arena by preparing researchers, administrators, managers, and policy and population health data analysts. Graduates will have the advanced training to become the health researchers and professionals that usher in a new era for health. More than ever, there is a need for multidisciplinary teams that can address large-scale, complex health issues.

If the program fills a regional workforce need, describe collaboration between your institution and regional employers in program development. Max 500 words.

A Ph.D. in Health Equity Sciences will fill a critical gap in New Mexico, the Southwest, and Mountain West health care and public health systems labor market. Potential employers for new graduates include the following.

- Universities
- Albuquerque Area and Navajo Nation Tribal Epidemiology Centers
- Public agencies providing human services or with responsibility for protecting the environment
- Private sector insurance companies and accountable care organizations
- For-profit and non-profit hospitals and health care systems
- Tribal governments
- Non-profit organizations

The COPH Advisory Council includes members of the community, employers of graduates of the college, leaders in the public health and health care communities, community preceptors, and other interested parties with expertise in training practitioners. One of the goals of the Council is to stay up to date on the local and regional employment trends and solicit feedback about training needs. When graduates move into the workforce, ongoing input from employers will play a role in identifying potential gaps in training or education, so that UNM graduates are more competitive in the job marketplace. The Advisory Council will also act as a network of employers that host undergraduate and master's level students for internships and practicum experiences and provide employment opportunities for graduates of the new Ph.D. program.

E. Duplication

Identify where similar degree programs are offered by other public higher education institutions in New Mexico in the box below. Max 500 words.

There are various health and public health-related undergraduate and master's level programs at UNM and throughout the state. Still, a doctoral-level study of public health or health equity sciences is not available at UNM or within the state. The new degree, in cooperation with New Mexico State University, will allow both of the institutions to leverage their strengths and resources while providing a rigorous curriculum delivered on both campuses. One unified program across the two institutions fulfills the need for a doctoral-level study with this focus. It does so without over-saturating the state with two similar programs or creating competition between the two institutions. Neither university is currently offering anything that compares to a degree in Health Equity Sciences. The current, related doctorate programs within the state include the following listed below.

University of New Mexico

- Biomedical Sciences (PH.D.-BIOM)
- Physical Education, Sports and Exercise Science (PH.D.-PESE)
- Statistics (PH.D.-Stat)
- Nursing and Nursing Practice (PH.D.-NUR and DNP)
- Medical Doctor
- Political Science (PH.D.-POLS)

New Mexico State University

- Nursing and Nursing Practice (Ph.D. Nursing and DNP)

New Mexico Highlands, New Mexico Tech, and Eastern New Mexico University

- No related doctorate programs

If similar programs are offered at other public higher education institutions in New Mexico, provide a rationale for offering an additional program in the box below. Max 500 words.

N/A

List any nearby non-New Mexico institutions of higher learning where the program is being planned or offered, particularly WICHE member institutions. Max 500 words.

The WICHE regional graduate program opportunities are listed below. These opportunities are limited to general public health doctoral programs or designed specifically for clinical practitioners such as nurses and laboratorians.

Northern Arizona University

- Interdisciplinary Health

University of Arizona

- Biostatistics
- Environmental Health Sciences
- Epidemiology
- Health Behavior Health Promotion
- Ph.D. minor in Public Health – designed for students from other doctoral degree programs who wish to obtain graduate training in Public Health

University of Colorado – Denver, Anschutz Medical Campus

- Public Health

University of Hawaii at Manoa

- Public Health

University of Nevada, Reno

- Public Health
- Statistics and Data Science

University of Utah

- Public Health
- Population Health Studies

F. Enrollment and Graduation Projections: Establish realistic enrollment, retention, and graduation targets for this program.

	Year 1	Year 2	Year 3	Year 4	Year 5
New Students	4	5	5	5	5
Continuing Students		4	9	14	15
Graduates				4	5
Annual Retention Rate Target (%)	Target 100% Graduation Rate (%)		Target Job Placement Rate (%)		
100					

G. Institutional Readiness

Describe the faculty resources that are needed to initiate the program. Will any additional faculty be needed? Max 500 words.

The program will start small with an initial class of four students at each institution and ramp-up to a total of 20 students by year five. At this rate, the current College of Population Health (COPH) faculty is sufficient to provide a quality, mentor-based program at a 1:1 ratio of faculty to students. In year one, the new Ph.D. program will borrow from the existing MPH program (1 FTE faculty and .25 FTE staff) and spread out the workload to ensure that students have sufficient mentorship and guidance. The doctoral student mentees will be an asset for supporting faculty research, including opportunities to solicit training center grants that only are available to doctoral-granting institutions. The benefits of doctoral students far outweigh the faculty mentorship's time-cost in supporting an expansion of research in the College.

The new program will attract two types of students – those with an MPH or related master's degree (preferred) and those with a bachelor's degree. Before their admittance, students with a bachelor's degree will need to take 14 credit hours before officially starting the doctoral program. This tuition revenue, along

with tuition revenue from the doctoral students, will help support the program and make it possible for the COPH to hire new staff as outlined in the table below.

Additional faculty will start at the beginning of FY2021, FY2022, and FY2023 to supplement the existing COPH faculty and take on mentorship responsibilities for doctoral students. The new positions will not require additional funding, because the Executive Vice President guaranteed these in an agreement negotiated by Dean Collins when the University hired her in 2019. The new Executive Vice President is honoring the commitment to these new positions and would like to accredit the college. This will require a minimum of 21 faculty.

	YEAR 1*	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6
Faculty	+1FTE	+1FTE	+1FTE			
Staff		+1FTE	+0.5FTE	+1FTE		+0.25FTE

Describe the library and other academic support resources that are needed to initiate the program. What, if any, additional resources will be needed? Max 500 words.

Additional library resources are not needed for the proposed Ph.D. in Health Equity Sciences. The Health Sciences Library and Informatics Center (HSLIC) actively collaborated with the MPH Program, even before it granted degrees, to develop a comprehensive selection of materials to support master's level students. During the first decade of its existence the MPH Program also contributed monies to build these collections. Therefore, the library currently provides access to the necessary journals and required material for graduate courses in the COPH that will continue to be used in the Ph.D. program. While these resources are currently available, there is no guarantee that the library will be able to afford these resources in the future, because of severe budget cuts. Population Health faculty are generating a list of core journals for HSLIC Faculty to consider in their evaluation of resources moving forward. The working relationship between faculties will continue to facilitate support for the needed range of resources in public health and population health.

In addition to what is offered at UNM's HSLIC, NMSU also offers comprehensive library services.

Describe the physical facilities of the institution that will be used for the first five years of the program. Will additional space or modifications of existing space be required within the first five years of program operation? Max 500 words.

Additional educational facilities are not needed for the new doctoral program in the first five years. The third Domenici educational building completes the development of the HSC educational complex, and it provides a completely equipped set of lecture, seminar, and workshop spaces that offer opportunities for lecture capture, conference webinars, and small group work. The new facility that is currently being designed for COPH and the College of Nursing has dedicated space for doctoral students, as well as shared meeting spaces.

NMSU offers similar classroom and additional distance educational facilities for our UNM students who choose to take their concentrations with a faculty mentor at NMSU.

Describe the institution's equipment and technological resources needed for the first five years of the program? What, if any, additional equipment will be needed? Max 500 words.

The new doctorate program does not require additional technological resources in the first five years. The HSC educational complex has the equipment to handle student lectures, labs, and seminar classes.

However, as the program grows and the COPH hires new faculty and staff, the new employees will need computers. These expenses are minimal, with \$2,000 budgeted per laptop, and covered by new tuition revenue.

Describe any other operating resources needed to initiate the program. Max 500 words.

None – N/A

Are there existing external facilities that will be used? Have agreements been established to ensure use of those facilities? For example, if you are offering a graduate nursing program have you established a partnership with local hospital(s) and other clinical settings? Max 500 words.

External facilities are not needed for the new doctoral program. Faculty and mentee field research will be developed on an individual basis with the current array of community organizations, public agencies, private sector, health care systems, and tribal partners from around the state. New partnerships will be developed as needed with agreements specific to each research project.

H. Projected Budget

Provide a clear analysis of the projected cost of the proposed program and the sources of funding that will support it for the first five years that the program will be offered. Include a discussion how any of the needed resources discussed in **Section G** will be addressed. **Section H** should be completed in collaboration with your institution's financial office.

The Start-up costs are based on the program enrollment listed below and detailed in the attached budget. The new doctorate program is intentionally starting small so that it does not incur any new, unsupported expenses. The strategic growth allows the new program to borrow resources from the existing Master's in Public Health Program (MPH). As an added bonus, we expect the new doctorate to attract additional MPH students (approximately 4 new students per year or 10%) to the university, so these new enrollments are listed and included in the start-up projections.

Student Enrollment Projections												
	Year 1		Year 2		Year 3		Year 4		Year 5		Year 6	
	New	Ret										
Ph.D. Students*	4		5	4	5	9	5	14	5	15	5	15
<i>Credit Hours</i>	36		36	36	54	72	54	126	18	180	18	198

Pre-req students	4		4		4		4		4		4	
<i>Credit Hours</i>	56		56		56		56		56		56	

*Assumes all students will be full-time

New Faculty and Staff Projections						
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Faculty	1FTE	1FTE	1FTE			
Staff		1FTE	.5FTE	1FTE		.25FTE
In years 1-6, the program will borrow 1FTE and .25FTE resources from the MPH program						
By year 6 there will be a total of 4FTE Faculty and 3FTE Staff						

I. ESTIMATED REVENUE

- Tuition – Ph.D. Students – the new doctorate program will start small, with four full-time students in the first year, and then scale up to five new students per year. A full-time course load is nine credit hours per semester or 18 per year. Assuming four students in year one, and a cost of \$297.90 per credit hour (a 4% increase over the current school year), this equates to revenue of \$21,449 in the first year. Year-over-year the tuition revenue estimates are adjusted 4% to account for tuition increases. By year six, Ph.D. students will generate nearly \$190,000 in tuition revenue.
- Tuition – Bachelor's students taking pre-requisites – The COPH Faculty expect the doctorate to attract bachelor level students that want to by-pass an MPH and go directly to the Ph.D. program. In their first year, these students will take 14 credit hours. Therefore, the budget includes revenue for four students per year starting in year two, which will generate an additional \$17,349 in tuition revenue each year.

- c. Instruction & General (I & G) – In the first year, the new doctorate will borrow faculty (1FTE) and staff (.25FTE) resources from the MPH program. Since there will only be four students, the existing MPH faculty and staff can easily absorb the additional workload to mentor and provide support for these new students. In years two through six, the MPH program will continue to share resources. However, as new faculty and staff are hired specifically for the doctorate program, the responsibilities will shift to these dedicated personnel.
- d. Training Grant – with the new doctorate program, the COPH will be eligible for training grants, such as the National Institutes of Health's T32 grant program. Faculty expect to apply for a training grant in year two or three to support students. A T32 grant would not only be a prestigious award, but it would support student research at UNM. T32 training grants provide money for tuition and fees and other training-related expenses such as conference and professional meeting attendance. As part of this grant, the university will receive a percentage to support grant administration. The proposed budget includes a T32 award starting in year four. An award of \$230,000 has the potential to support six pre-doctoral students. However, the success of the program does not rely on a training grant. Faculty and staff positions are fully supported whether the COPH successfully applies for a T32 or other type of grant.
- e. Other – 3FTE New Faculty @ \$150,000 each – The College's new Dean negotiated three new faculty positions as part of her new hiring package in 2019. The Provost guaranteed these positions, and the first will be hired in FY2021.

II. EXPENSES

- a. Faculty Salaries – Faculty salaries are calculated based on \$150,000 per 1FTE, with an annual increase of two percent. Again, as stated above, the new doctorate program will borrow from the MPH program to mentor new Ph.D. students so that the program can begin without additional faculty. Funding guaranteed by the Provost will allow the COPH to hire three other faculty in fiscal years 2021, 2022, and 2023. These positions will become part of the COPH's I & G funds in subsequent years.
- b. Staff Salaries – In the first year, an existing member of the MPH staff will help support the Ph.D. program on a part-time basis (.25FTE). As the program grows, the new tuition revenue will support hiring new staff members; with one additional staff FTE in Year 2, 0.5FTE staff in year 3, one more FTE in year 4, and a final 0.25FTE in year 6. By year six, the program will have 3 staff FTEs – with tuition revenue supporting 2.75 FTE staff, and 0.25FTE borrowed from the MPH program. These positions include an Academic Advisor, a Program Coordinator, and an IT Support Technician II.
- c. Learning Resources – These include items such as books, learning management tools, tutoring, workshops, conferences, and training expenses.
- d. Equipment – Includes items such as laptops, desktops, and other miscellaneous IT needs.
- e. Facilities and Modifications – Includes money to modify or create space for doctoral student offices. The new facility that is currently being designed has dedicated student space for doctoral students. The new facility that is currently being designed for COPH and the College of Nursing has dedicated space for doctoral students, as well as shared meeting spaces.
- f. T32 Training Grant – budgeted support for six predoctoral students. If taken away, these funds do not change the budget, and net surpluses or deficits do not change. Except for overhead, the majority of this training grant passes directly to students.
 - i. Stipends – The granting agency determines annual stipend levels. Trainees generally are supported for 12-month full-time training appointments for which they receive a stipend as a subsistence allowance to help defray living expenses during the research training experience.
 - ii. Training Related Expenses – includes direct expenses such as staff salaries, consultant costs, equipment, research supplies, staff travel, trainee health insurance (self-only or family as applicable), and other expenses directly related to the training program. Funds are requested and awarded as a lump sum based on the predetermined amount per predoctoral and postdoctoral trainee approved for support.
 - iii. Tuition & Fees – Support through a T32 grant varies depending on the type of student as follows:
 1. **For Predoctoral Trainees.** An amount equal to 60% of the level requested by the sponsoring institution, up to \$16,000 per year, will be provided. If the program

Institution: UNM College of Population Health
Proposed Program: PhD – Health Equity Sciences

Projected Graduate Program Cost Estimates and Resources

ESTIMATED REVENUES	Year 1		Year 2		Year 3		Year 4		Year 5		Year 6	
	Existing	New	Existing	New	Existing	New	Existing	New	Existing	New	Existing	New
Projected University I&G or Tuition	\$168,250	\$21,449	\$340,557	\$45,232	\$529,812	\$47,042	\$724,611	\$48,923	\$772,157	\$50,881	\$822,603	\$52,916
External Grants and Contracts								\$230,000		\$230,000		\$230,000
Other		\$150,000		\$150,000		\$150,000						
TOTAL REVENUE	\$339,703		\$535,793		\$726,858		\$1,003,538		\$1,053,041		\$1,105,523	
ESTIMATED EXPENSES	Year 1		Year 2		Year 3		Year 4		Year 5		Year 6	
	Existing	New	Existing	New	Existing	New	Existing	New	Existing	New	Existing	New
Salaries and/or benefits (Faculty & Staff)	\$160,750	\$150,000	\$316,965	\$193,000	\$520,164	\$171,500	\$679,998	\$43,000	\$737,458	\$0	\$626,240	\$0
Learning Resources						\$1,500		\$3,000		\$4,500		\$6,000
Equipment	\$2,500	\$0	\$2,500	\$4,000	\$5,000	\$2,500	\$5,000	\$3,000	\$5,000	\$4,000	\$5,000	\$5,000
Facilities & modifications	\$5,000		\$5,000	\$2,000	\$5,000	\$3,000	\$5,000	\$4,500	\$5,000	\$5,000	\$5,000	\$5,000
Other – grant related								\$230,000		\$230,000		\$230,000
TOTAL EXPENSES	\$318,250		\$523,465		\$708,664		\$973,498		\$990,958		\$1,018,957	
DIFFERENCE (Rev.-Exp.)	+\$21,453		+\$12,328		+\$18,194		+\$30,041		+\$62,084		+\$86,566	
ESTIMATED IMPACT OF NEW PROGRAM	Year 1		Year 2		Year 3		Year 4		Year 5		Year 6	
	FTE Enrollment		9		14		19		20		20	
Projected Annual Credits Generated	72		162		252		342		360		360	
Tuition Generated	\$21,449		\$67,539		\$99,239		\$133,367		\$170,067		\$209,489	

MEMORANDUM OF UNDERSTANDING

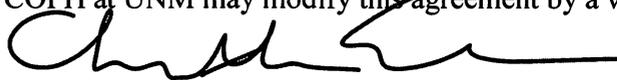
**Memorandum of Understanding
between
New Mexico State University—Department of Economics, Applied Statistics, and
International Business;
New Mexico State University—Department of Public Health Sciences;
and
University of New Mexico—College of Population Health**

This Memorandum of Understanding (MOU) between the Department of Economics, Applied Statistics, and International Business (EASIB) at New Mexico State University (NMSU), the Department of Public Health Sciences (PHS) at NMSU, and the College of Population Health (COPH) at University of New Mexico (UNM) permits course-sharing in support of the anticipated doctoral program in Health Equity Sciences (HES). The HES program is to be offered via cooperative agreement between PHS at NMSU and COPH at UNM. Doctoral students in the HES program from either institution will be permitted to enroll in the following Applied Statistics courses from EASIB at NMSU to fulfill either core or concentration requirements, in particular the concentration in Biostatistics that is shared by NMSU and UNM:

A ST 6XX. Computational Statistics
A ST 6XX. Linear Models
A ST 6XX. Time Series
A ST 6XX. Bayesian Theory

The HES doctoral program is anticipated to begin in Fall of 2022. Students who select the Biostatistics concentration would choose two of the above courses based on interest and availability, and it is anticipated that 1-2 students at most per semester will need access. Concentration coursework in the HES program is not likely to begin until Fall of 2023 at the earliest.

This MOU shall become effective upon the date of signature by the authorized officials from EASIB and PHS at NMSU and COPH at UNM and will remain in effect until terminated by any party upon one semester's prior written notice to the other parties. EASIB or PHS at NMSU or COPH at UNM may modify this agreement by a written addendum signed by all parties.



Christopher Erickson, PhD, Interim Department
Head and Professor, EASIB, NMSU

12/13/2020
Date



Héctor Luis Díaz, PhD, Acting Department Head,
PHS, NMSU

12-14-2020
Date



Tracie C. Collins, MD, MPH, MHCDS, Dean and
Professor, COPH, UNM

1-15-2021
Date

for Dr. Collins