



Academic Program Review for the Certificate in Public Health Program



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**Diné College
Shiprock North Campus**

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A. Executive Summary

The public health program at Diné College is an academic program of coursework leading to certificates and degrees, but also a locally relevant research program that informs the coursework and provides opportunities for student learning experiences outside of the classroom. Furthermore, the active research program and academic coursework are supportive of activities and objectives of the Navajo Nation, and allow for workforce development as well as faculty and staff participation in ongoing work of the Navajo Department of Health. This research and this education has been grounded in the Diné Education Philosophy to be culturally competent, connecting to Navajo language and culture in the classroom and through work that includes traditional understandings and with knowledgeable individuals in the Center for Diné Studies, the Diné Policy Institute and the Land Grant Office of the College. Through these collaborations the College's faculty, staff and students have been directly working with Navajo communities to improve health. The program has thus been making contributions to each of the components of the College's Mission Statement: use of the DEP concepts in curriculum, education for employment as well as for continued education, contributing to continued relevance of Navajo language and culture, and service to the community and research in support of local needs.

This Academic Program Review Report describes the Certificate in Public Health for purposes of assessment and improvement. This review will include a description of the existing coursework in the program and its delivery to all Diné College Campuses through the Interactive Television (ITV) system of the college, pandemic-related use of ZOOM, and the Blackboard online learning system. The student assessment measures and data over five years will be reviewed, as well as other outcomes of the program including the relationship with the Navajo Nation Community Health Representative (CHR) Program and alumni. Faculty activities in professional development, service to communities and the Navajo Nation, and research will be described. The resources that support the program, with its ambitious model of teaching, research, outreach, and partnering with the tribe and others will be described and assessed, including the externally funded grants that support these opportunities for faculty and students.

This Program Review is taking place at a time of dynamic change in the overall public health programs of the College, which include this Certificate in Public Health jointly awarded with the University of Arizona's Mel and Enid Zuckerman College of Public Health, and the Associate and Bachelor Degree programs that can follow. The Navajo NARCH Partnership further enhances this growth through support for faculty positions and faculty development, for additional student research training and internships, for expansion to include high school students through dual enrollment and summer experiences in public health, and for collaboration with Northern Arizona University to develop an Indigenous Public Health track to their newly implemented Masters in Public Health. This growth and expansion of programs has led the College to make some changes in the structure of the Certificate program, which will also be described further in this Program Review Report. An additional development is a plan for the College to develop a Certification program for Community Health Workers. This review can lead to recommendations for the Certification and future role of the Certificate program as a part of that.

B. Program Overview

B.1 Program Historical Background:

Diné College has been involved in public health research, community outreach, workforce development/training, and program development for over 30 years in collaboration with a great number of partners including Navajo Nation Division of Health, Indian Health Service, and with numerous other institutions and agencies.

The Certificate in Public Health was approved in 2004 as a result of a confluence of events and initiatives of the College in collaboration with the Navajo Nation Department of Health, funding agencies including the Centers for Disease Control, National Institutes of Health, and regional university partners. A key milestone was the signing of an MOU with Navajo Nation Department of Health Community Health Representative (CHR) Program in which the College committed to providing public health coursework at all campuses across the Navajo Nation and the CHR program committed to requiring the coursework for their employees and supporting the time and resources required for them to take the courses. This Certificate in Public Health was provided for all CHRs, while the Associate Degree program's emphasis was on building the skills and knowledge of supervisors in the CHR program so that public health practice could be included in the provision of preventive healthcare services on the Navajo Nation.

The Certificate was designed as part of a Navajo NARCH Project (NIH funding) to the Navajo Department of Health, with the University of Arizona and Diné College as partners, which is how the Certificate came to be jointly issued by the University and the College, and part of a Memorandum of Understanding between the College and the CHR program. All of the enrolled students in the program were CHRs for the first several years.

B.2 Program Mission:

To build the Navajo Nation's capacity to reach health equity. To prepare or enhance students for employment in the public health workforce, especially on the Navajo Nation, for students to continue in the Bachelor's of Science in Public Health at Diné College and/or for transfer to relevant bachelor's degree programs in regional colleges and universities.

The program's Mission is aligned with the Diné College Mission "Rooted in Diné language and culture...to advance quality post-secondary student learning and development to ensure the well-being of the Diné People. By preparing our Public Health graduates to work in the area of health in the Navajo Nation, and to transfer to complete more advanced programs elsewhere, our program has great potential to "ensure the well-being of the Diné People." Moreover, the program is based upon, and continually reinforces through example and program structure, the College Principles as articulated in the current College Catalog (p. 9): *Nitsáhákees* (thinking), *Nahat'á* (Planning), *Iiná* (Implementation) and *Siihasin* (Assurance).



B.3 Program Purpose:

The purpose of the Certificate in Public Health at Diné College is to function as one of the academic components of a holistic design that includes research, community outreach and service, workforce development, and collaborative relationships with the Navajo Department of Health and with universities establishing a networked environment in which students, faculty, and Navajo Nation and other programs can participate in advancing their own capabilities and advancing the overall public health capacity for the area.

Research

Research on topics of concern to Navajo communities has been pursued by College faculty for the past 40 years, providing opportunities for student research training and experience while engaging students with community and using results to enrich the curriculum. Significant findings that more active kinds of family support promote health of Navajos with diabetes emerged from years of research on that topic. More accurate cancer descriptions in Navajo language have been developed and are being tested in cancer screening outreach efforts in a major effort with tribal, IHS and Mayo Clinic professionals. Years of research on nutrition of children and families showed major barriers in affordable and available healthy foods, leading now to assessment of gardening and its impact on nutrition. Another major topic concerns environmental concerns of water quality and other exposures from the history of uranium mining, where College faculty, staff and students have worked to assess exposures and impacts in a variety of studies. A new area of research in behavioral health is helping the College to explore use of positive community norms in encouraging healthy behavior change.

Outreach & Health Promotion

Some of the College's research has led directly to the use of the knowledge to provide updates to Navajo communities in the form of presentations, dissemination of information at health fairs and other means, and development of new programs such as gardening interventions. In other areas funds have been acquired to provide community outreach in key areas such as HIV, Hepatitis C and substance abuse prevention, including providing free and anonymous HIV and HCV testing and referral. Students studying public health education methods use video equipment to develop materials on a variety of health topics for local use, resulting in Youtube videos on using glucose monitors, dangers of texting while driving, and others.

Workforce Development and Public Health Curriculum

Diné College was among the first of any college in the US with an undergraduate degree in Public Health in 2004. This began with assessments of the needs of the Community Health Representative (CHR) Program of the Navajo Nation, resulting in our "Certificate in Public Health," jointly awarded by Diné College and the College of Public Health at the University of Arizona. A Memorandum of Understanding was developed with the tribal program documenting the policy that all CHRs will complete the Certificate coursework as part of their training. It is designed for working health professionals as well as students wishing to pursue a health profession that emphasizes community and population health, promoting Navajo concepts of health and wellness. Over 150 employees of the Navajo Department of Health, most of them CHRs, have earned this Certificate. For supervisory personnel the Certificate in Public Health degree requires additional public health coursework plus general education, resulting in a transfer program to colleges and universities that offer four year programs in public health, health education, health promotion or community health. The program offers

two options: Health Education Socio Cultural Option and the Environmental Public Health Option. The Summer Research Enhancement Program is also a part of the Associate Degree, providing academic credit for a research methods course and practicum. In the future, with the Navajo Division of Health taking on the responsibilities of a state department of health will need many more BS and MPH degreed people over the next several years and the College is working with partners to bring needed coursework to the Navajo Nation.

Partnering

An exemplary partnering relationship exists between the College and the Navajo Nation, with significant faculty and research staff collaboration with the CHR Program (see above), Health Education, Breast & Cervical Cancer, Special Diabetes, Emergency Preparedness, Navajo EPA, Head Start and other tribal programs. One faculty member, Mark Bauer, was a member for many years of the Navajo Nation Human Research Review Board, and the college is also a co-host of the biannual Navajo Research Conference where all researchers working on the Navajo Nation are expected to present results to the tribe and the communities. The College also has strong partnering relationships of long standing with a variety of universities, Indian Health Services Health Promotion programs, funding agencies, and with the Centers for Disease Control & Prevention.

B.4 Program Goals:

1. To introduce students to the ten essential services of public health, to traditional Diné concepts of health and healing, and to increase student understanding of the implementation of the Diné Educational Philosophy in public health work on the Navajo Nation.
2. To promote a view of public health practice on the Navajo Nation based on concepts of resilience and community assets.
3. To introduce students to public health competencies as established by national public health accreditation organizations.

The Certificate in Public Health also contributes to the College's Strategic Goals and Objectives for 2017 – 2021 in the following ways:

1. Advance the Institution's Diné Identity
The program strives in every course to reference Diné concepts and through content, examples, and guest presenters to make the courses relevant to the application of public health in Navajo community settings.
2. Promote student success and development
The program consistently over time has developed and maintained opportunities for students to have internships and travel to conferences to expand their opportunities for career readiness and leadership development.
3. Strengthen financial health and self-reliance
The program faculty consistently seek additional funding to maintain professional development opportunities for faculty, staff and students in the program as a way to support institutional growth, and have worked with the institution's accounting and grants management offices to build and maintain appropriate processes for compliance.

4. Promote effective communication and accountability
The program provides numerous opportunities for faculty professional development, including participation in leading the development of curriculum, of student enhancement projects, and research in the area of public health.
5. Expand effectiveness and efficiency using technology
The program has been an institutional leader in the use of technology and even in contributing to efforts to build additional infrastructure to improve programs and student learning. Public Health was the first program to make use of the Instructional Television (ITV) system of the college to offer courses, and still is the only program to provide access to all program required coursework to every campus and center through this technology. Similarly in the area of use of online student learning software such as Blackboard, and of use of internet resources in bringing information to students and classes, the Public Health program has consistently been in a leading role.
6. Cultivate Diné Nation building
The Public Health program was developed initially in response to the expressed needs of the Navajo Nation to collaborate to bring training and education of this kind to strengthen the backgrounds of employees and to provide additional resources in the area of health. The Memorandum of Understanding with the Community Health Representative program, and strong collaborative relationships with other Navajo Nation Programs (Navajo Epidemiology Center, Health Education, Navajo EPA, etc.) are all evidence that the College's public health program is seen as meeting needs as well as providing sustainable employment for graduates.



C. Degree program Description

C.1 Curriculum

Course Offerings

The curriculum for the Certificate in Public Health includes lower level introductory coursework in the discipline of public health. Degree requirements give students an introduction to the subdisciplines of public health and provide the necessary background for future coursework in more esoteric areas of public health practice and/or research as well as practical knowledge of public health praxis.

Lower Level Discipline-Specific Courses

Public health competencies are taught through a series of 100 and 200 level public health courses which provide students with the necessary foundations to either work or pursue other academic work in public health. Courses focus on the historical background and essential services of public health, policy, health education, the program development and implementation cycle, environmental health issues, and in some cases beginning research methodology. All courses are taught using Diné concepts of health and wellness, healing, and cultural notions of community. Public health processes are enriched by the use of Diné models and examples of health issues and programming on the Navajo Nation. The following courses include those used for the 2015-2017 checklists and the alterations made for the 2018-2021 academic years.

HEE 111 Personal and Community Health (3)

- Included as Option A (1 of 15 courses that could be chosen) from 2015-2017
- Required from 2018-2021

Explores how to achieve, maintain, and promote wellness. Also covers prevention and control of diseases, nutrition, consumer health, and ecology.

PUH 111 Introduction to Public Health (3)

- Required from 2015-2021

This course introduces students to all aspects of the field of public health, focusing on health promotion and disease prevention goals designed to establish and maintain healthy communities. The 3 core functions and 10 essential services of public health, as well as reading and lecture materials are organized and presented within the contexts of the Diné educational philosophy to help students become both knowledgeable and culturally competent public health professionals in the Navajo Nation.

PUH 141 Nutrition for Health (3)

- Included as 1 of 3 courses that could be chosen from 2018-2021



General concepts of nutrition applied to food choices that support health; cultural, psychological, and economic implications of food choices. Current concepts and controversies in human nutrition. Carbohydrate, protein, lipids, vitamins, and minerals in nutrition, and the relation of nutrition to health throughout the life cycle.

BIO 170/PUH 170 Medical Terminology (3)

- Required from 2018-2021

Basic tools are provided, such as root words, prefixes, and suffixes, for building an effective verbal and written biomedical vocabulary.

PUH 201 Principles of Environmental Public Health (3)

- Included as 1 of 3 courses that could be chosen from 2018-2021

This course explores environmental health professionals' roles in ensuring safe and healthy environments, including sanitation, food safety, and occupational safety, and air and water quality. Policies and activities of federal, state, local, and tribal entities are examined, with a focus on Navajo examples.

PUH 270 Community Health Assessment and Planning (3)

- Required from 2015-2017

This is the first of two courses in which students examine assessment, planning, implementation, and evaluation in public health practice. The course focuses on assessment and planning as carried out in epidemiology, environmental public health, health education and promotion, and health services administration. It explores Navajo ways of knowing, defining, and thinking about health problems (Nitsáhákees) and the process of planning (Nahat'á) health intervention programs.

PUH 275 Health Services and Policy (3)

- Included as 1 of 3 courses that could be chosen from 2018-2021

In this course, students are introduced to health services administration and the role of policy development in public health. The course covers national, state, local, and Navajo Nation health services, focusing on how they are organized and administered. U.S. public health services are compared with those on the Navajo Nation and other tribal communities. The course is taught in accordance with the Diné educational philosophy (primarily in the realm of Íiná).

PUH 280 Implementation and Evaluation of Public Health Interventions (3)

- Included as a required course in Option A from 2015-2017

This is the second of two courses about assessment, planning, implementation, and evaluation in public health. This course focuses on implementation and evaluation as carried out in epidemiology, environmental health, health education and promotion, and health services administration. It is taught in accordance with the Diné educational philosophy (primarily in the realm of Íiná and Siihasin).

PUH 290 Public Health Research Methods (4)

- Included as a required course in Option B from 2015-2017

This research methods course covers basic concepts in public health, health promotion, and disease prevention, including its cultural aspects. The design and implementation of qualitative and quantitative research are covered, including hypothesis development, research design, development of research protocols, data analysis using computer software packages, and presentation of results.

PUH 297 Public Health Research Methods Practicum (3)

- Included as a required course in Option B from 2015-2017

Students will apply their knowledge of experimental design, data collection and data analysis methods and techniques within the context of public health, health promotion and disease prevention programs or research settings, incorporating cultural aspects of disease prevention where appropriate. Presentation of findings to program stakeholders is also required

C.2 Degree Program Organization

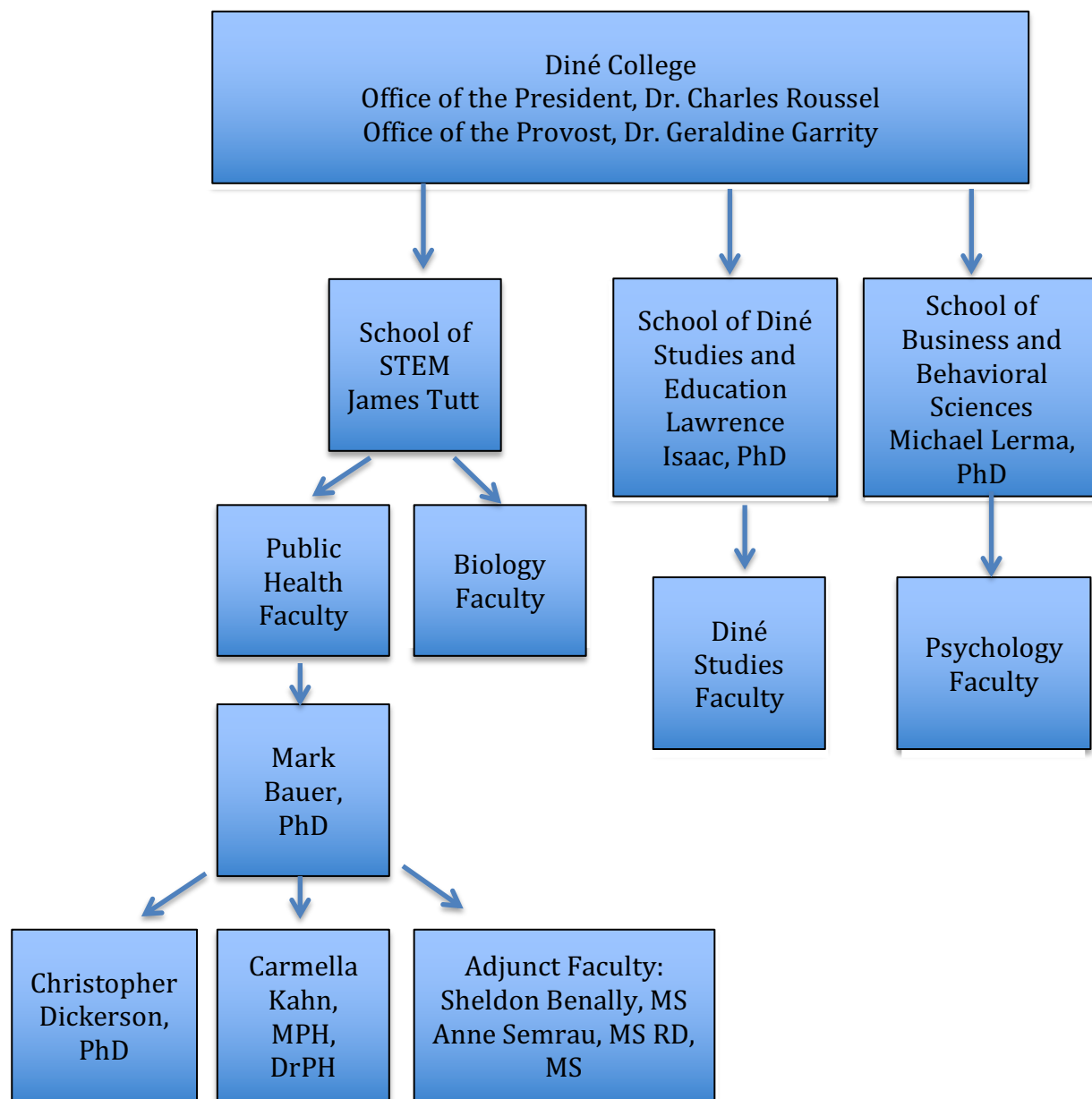
The Certificate in Public Health is part of the School of STEM and is supervised by Mr. James Tutt, Dean of the School of STEM. The public health program is directed by Dr. Mark Bauer in collaboration with Public Health faculty Dr. Carmella Kahn and Dr. Christopher Dickerson. Faculty communication with Mr. Tutt and other school of STEM faculty occurs during informal Monday and Wednesday meetings, faculty development opportunities like Intercampus Days and Convocation, as well as through email exchanges regarding specific topics pertaining to either program development or coursework delivery and assessment. Public health faculty interact daily and meet weekly in order to review program development, student success, and community outreach and grant responsibilities.

The public health program communicates with students through a variety of venues, seeing close communication with students as vital to their success and engagement. Program announcements and presentations occur regularly in classes offered by the department. Faculty members work closely with both student advisors and student success counselors to advise students about coursework and degree progress, student achievement, and biannual registration for classes. Public health faculty members communicate with student advisement regularly and conduct trainings when necessary. In addition, faculty attend and participate in orientation activities that allow students to learn about program options and to support the development of academic skills that will contribute to student success in the program.

Materials have been developed about the certificate degree and are distributed at many different arenas. These materials include a regularly revised brochure about the components of the program and processes for admission and registration. Course flyers are also created every semester and distributed at the time of registration in order to educate students about course availability and offerings. Materials and information are distributed through an extensive network of community ties that are the result of years of community outreach with local healthcare organizations (especially the IHS), public health organizations, tribal institutions (like the Navajo Nation Department of Health and especially health education, the Navajo Epi Center, and the CHR program), grant partners, and campus centers. Presentations about grant-funded research and public health program efforts include discussions about the academic public health programs at Diné College. Dr. Carmella Kahn manages a Facebook page that gives timely information to students and celebrates student and faculty accomplishments. Finally,

the processes related to the creation and implementation of the Summer Research Enhancement Program (SREP) are an additional avenue to distribute information about the Certificate in Public Health and to recruit students interested in pursuing a locally-based public health educational degree.

Below is an organizational chart representing professional relationships within the Certificate in Public Health Program:



C.3 Instruction Method

Prior to the COVID-19 pandemic, the public health courses were offered via Interactive television system (ITV) to the six Diné College sites. During the pandemic the courses are now offered via Zoom, MediaShareIQ, Blackboard, and other online platforms. Delivery strategies for courses in the certificate degree include a combination of lectures, discussions, group projects, in-class activities, student presentations, scenarios, case studies, and guest speakers. Additional resources include online modules related to specific public health skill sets or trainings, seminar formats emphasizing a question and answer format, hands-on activities that require the transfer of lecture-based information, and community – based assignments that necessitate the application of public health knowledge to real life situations. Those items assessed that relate to employment in a public health setting include support in related areas including professional skills and communication (written and oral).



All materials used in class, including Powerpoint presentations of lectures and discussions, are posted on Blackboard for student review. Classes are also recorded using Zoom or MediaShareIQ and video links are posted to Blackboard for students to review past lectures or make-up missed classes. Student accommodations include course notes and materials sent before class sessions for students to review prior to class lectures and discussions, inclusion of projects that use multiple intelligences and highlight varied skill sets, and the continuous evaluation of student learning in order to adjust course delivery to meet specific student needs.

C.4 Student Learning

The Program Assessment for the certificate degree was created in Spring 2018 and includes PSLOs that reflect locally-informed public health practice. The PSLOs were created using public health competencies and combine an assessment of knowledge, skills, and student self-confidence to measure program effectiveness. The changes in certificate course requirements between 2015-2017 and 2018-2021 has resulted in short duration of data collection for course artifacts.

The following PSLOs were created in accordance with the program mission of the Certificate in Public Health. The mission of this program is to prepare or enhance students for employment in the public health workforce, especially on the Navajo Nation, and/or for transfer to relevant associate degree or bachelor's degree programs in Dine College and other regional colleges or universities. Faculty in public health have used both the Diné Educational Philosophy and the Four Pillars to inform the creation of the following PSLOs.

Outcome # 1: Students will identify and describe factors that affect the health of communities on the Navajo Nation. The pillars of knowledge, leadership, skills, and tradition are integrated into this outcome. This outcome is demonstrative of Nitsáhákees in the Diné Educational Philosophy.

Outcome #1: This outcome will use the answers to question 1 on the HEE 111 midterm.

Target #1: Using question 1 on the HEE 111 Midterm Exam, students will identify and describe factors that affect the health of communities on the Navajo Nation. 75% of students will earn 14 out of 20 points for these questions.

Source of evidence: Score of 14 pts or higher on 20-point midterm exam for question 1.

	Fall 2019	Fall 2020
*Number of Students in HEE 111	23	33
Number earning 14/20 or higher	16	28
Percent earning 14/20 or higher	70%	85%

Outcome # 2: Students will describe how public health science together with the Diné Educational and Research philosophies are used in the delivery of the tree core functions and ten essential services in public health on the Navajo Nation. This outcome demonstrates the Navajo concept of Nitsáhákees related to the gathering of information and knowledge about underlying processes in public health. The college-wide pillars of knowledge, skills, and traditions are supported through both the acquisition of public health knowledge and skills along with related information about Navajo educational and research philosophies.

Outcome #2: Assessment will occur in PUH 111 with the final exam question number 10

Target #1: 70% of students in PUH 111 will demonstrate proficiency with a grade of 70% or higher for question 10.

Source of evidence: Score of 14 pts or higher on 20-point Final Exam Question 10

	2015-2016	2016-2017	2017-2018	2018-2019	2019- 2020
*Number of Students in PUH 111	13	14	45	5	40
Number Scoring 14/20 or higher	N/A**	11	30	5	34
Percent Scoring 14/20 or higher	N/A	79%	67%	100%	85%

Outcome #3: Students will attain knowledge of vocabulary used by health professionals to describe component parts of medical terms and disease processes. The pillars of knowledge, skills, and tradition are integrated into this outcome. This outcome is demonstrative of Nitsáhákees in the Diné Educational Philosophy.

Outcome #3: This outcome will occur in PUH 170 and will use the cumulative score for Weekly Quiz #15.

Target #1: Students will identify vocabulary used by health professionals in health care services and public health programming. 75% of students will earn 23 out of 33 points on the quiz.

Source of evidence: Score of 23 pts or higher on 33 point Weekly Quiz #15

	Fall 2018	Spring 2020
*Number of Students in PUH 170	28	40
Number Scoring 23/33 or higher	21	33
Percent Scoring 23/33 or higher	75%	83%

Outcome #4: Students will express confidence in learning and performing public health sciences that they have learned in the program. The pillars of knowledge, leadership, skills, and tradition are integrated into this outcome. This outcome is demonstrative of Sihasin in the Diné Educational Philosophy.

Outcome #4: This outcome uses a certificate exit survey to ascertain confidence in student ability in public health practices. Questions that assess this outcome will be determined upon development of the survey.

Target #1: *Exit survey in which students will evaluate their confidence in learning, evaluating, and performing public health sciences.*

Source of Evidence: *Exit survey of students graduating from the program and will be part of the end of semester graduation preparation at the end of the Spring 2020 semester.*

Exit Survey of Graduates

In 2016 the target (that 100% of the graduates would rate the program a 4 or 5 out of 5 on a number was only partially met (in spite of the fact that 100% of the respondents met the target) because there has only been one response to date from the exit survey (out of 6 students graduating). All ratings by the student were in the "strongly agree" or "agree" categories. The student "strongly agreed" that our program prepared for transfer or a career in public health and increased ability to interpret data and awareness of many public health and environmental issues.

The responses below were collected from seven alumni in 2020.

Student commitment, interest, and self-confidence in future career/education	Student responses
1. My public health education at Diné College was excellent.	Agree=7 Neutral/NA=0 Disagree= 0
2. My public health education prepared me for transfer to a 4yr institution or the career of my choice.	Agree=7 Neutral/NA=0 Disagree= 0
3. My public health education at Dine' College has increased my <u>lab</u> skills.	Agree=7 Neutral/NA= 1 Disagree= 0
4. My public health education at Dine' College has increased my <u>field</u> (community) skills.	Agree=7 Neutral/NA=0 Disagree= 0

5 My public health education at Dine' College has increased my ability to interpret data.	Agree=5 Neutral/NA= 2 Disagree= 0
6. My public health education at Dine' College has increased my capability to make decisions about political issues.	Agree=5 Neutral/NA= 2 Disagree= 0
7 My public health education at Dine, College has increased my awareness of public health issues.	Agree=7 Neutral/NA=0 Disagree= 0
8. My public health education at Dine' College has increased my awareness of environmental issues and my ability to make informed decisions.	Agree=7 Neutral/NA=0 Disagree= 0
9. My public health education at Dine' College has increased my capability to make informed decisions about everyday life/real world situations.	Agree=7 Neutral/NA=0 Disagree= 0
10. Traditional and western science were successfully integrated into my public health education at Dine' College.	Agree=7 Neutral/NA=0 Disagree= 0

Strengths of the Certificate in Public Health program

Courses helped expand world view on environmental issues and personal health.

Increased insight in everyday work in the public health field.

Use knowledge to teach elders about physical, mental, and social well-being.

I learned that public health is very important here on our Navajo land. I'm so thankful to be a part of this team who work to help our people. Attending the conference this past year in Window Rock, AZ helped me to see the background work that is going on and it's specific for just our people.

It made me more alert about how our Navajo Nation is being affected and I want to help people that are struggling with diabetes or other diseases.

It has made me become aware of the community, environment, and tradition with the COVID-19 pandemic going on. It's made me understand statistics also the CDC.

Recommendations to improve the program

Have more tutors in public health fields. I have struggled with my essays and how to gather data. This would be so helpful in the future.

The majority of students mentioned they were pleased with the program and were thankful instructors have been helpful with the transition to online classes during the pandemic.

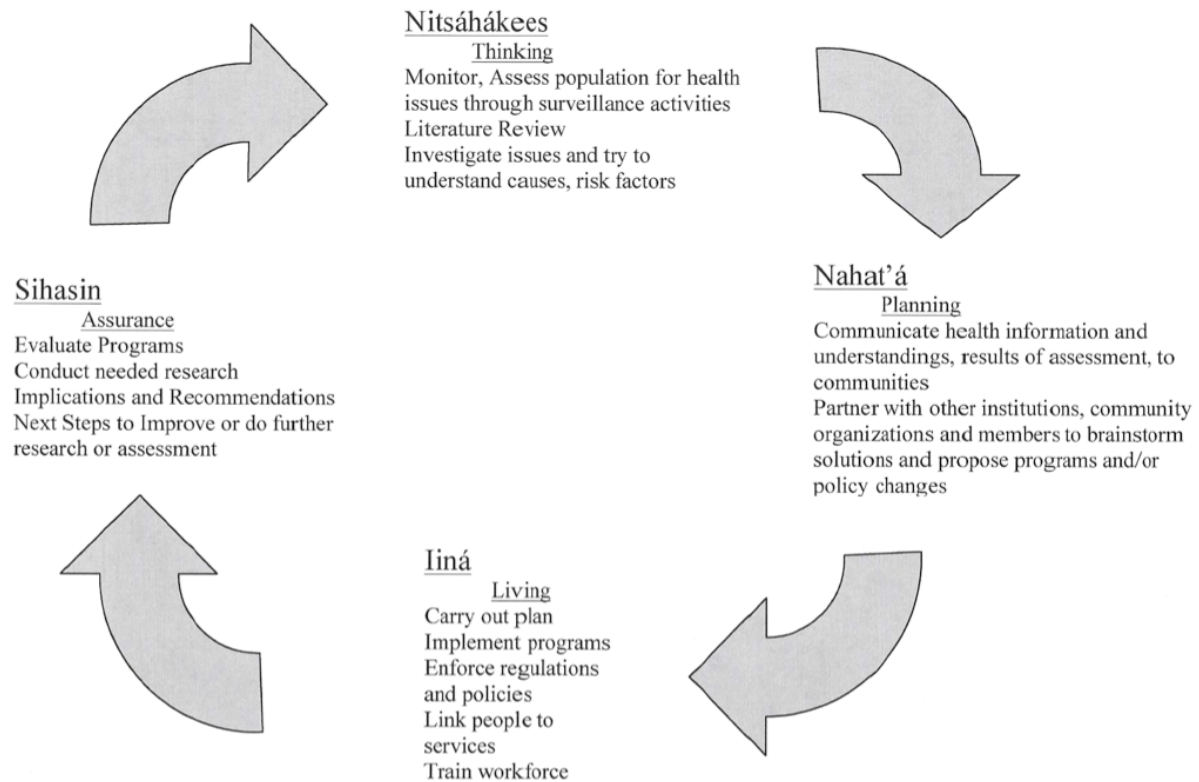
C.5 Diné Identity

The Certificate in Public Health was created using the Diné Educational Philosophy to shape the program progression as well as to inform content and assessment in curriculum. “Public Health” as a discipline developed in a “western” (European / Anglo-American) cultural context wherein problems were to be identified and measured, then solutions were to be devised so that the problems could be attacked – as in the “war on cancer” or “war on poverty” or “war on drugs” that have been part of the American political landscape in recent decades. In contrast to this approach, Diné College Public Health faculty present a philosophy of Public Health that derives from traditional Navajo teachings, which are reflected in the “Dine Educational Philosophy” developed at Diné College. The key concepts and values in this educational philosophy are sequential and can be expressed with the following words:

<i>nitsáhákees</i>	–	thinking	(associated with the East)
<i>nahat’á</i>	–	planning	(associated with the South)
<i>iiná</i>	–	living	(associated with the West)
<i>sii hasin</i>	–	fulfillment	(associated with the North)

Diné concepts of health and wellness, healing, and community are integral to the development of course content. As a locally-based public health program, examples and scenarios illustrating important public health concepts are from the Navajo Nation. In addition, all coursework, including research methods courses, include content that acknowledges and honors the unique history of the Navajo Nation. Students are encouraged to use Diné models and metaphors to understand health issues in their communities and/or to adjust existing public health models to include traditional perspectives and beliefs.

An example, developed by Drs. Bauer and Garrison at the inception of the certificate degree is the use of the Diné Educational Philosophy to inform the public health development cycle.



Both Navajo Language and the Diné Educational Philosophy (DEP) are found in the content and organization of coursework in the Certificate in Public Health. In PUH 111 Introduction to Public Health, for example, the DEP model is used to describe Public Health Processes and interfaces with public health models that are based on professional public health competencies. Diné concepts of health, wellness, and healing, based in Navajo creation stories and traditional proscriptions for behavior, are taught along with Western biological notions of disease pathologies, treatment, and prevention.

As a locally-based program, the coursework in the Certificate in Public Health focuses on examples from the Navajo Nation to highlight health issues, healthcare response, public health interventions, and tribal policy development and implementation in order to elucidate foundational public health concepts. Such local examples, contribute to an understanding of public health praxis as immediate, relevant, and applicable to life on the Navajo Nation.

D. Data Analysis

D.1 Enrollment

Due to new degree offerings, shifts in enrollment in the Public Health program have occurred. Since 2015, the certificate has declined as the declared primary major with an initial shift to an Associate of Science in Public Health and now to the Bachelor of Science in Public Health. There was a brief increase in 2019 but the 2020 numbers suggest a return to the levels of 2016-2018.

Major	Fall Semester					
	2015	2016	2017	2018	2019	2020
Bachelor of Science Bachelor of Science, Public Health	-	-	-	52	76	93
Associate of Science Public Health	29	13	11	4	5	32
Public Health w/Health Educ Socio-Cult Option	5	16	25	27	36	15
Public Health w/Environmental Public Hlth Option	-	7	10	8	11	8
Certificate Public Health Certificate	15	4	2	2	9	4
Total	49	40	48	93	137	152

Historical Headcount

This Headcount data is reflective of the 21-Day headcount from Fall Semester 2015 – 2020.

Overall, growth has occurred in enrollment in the Public Health Program, STEM degrees, and Diné College so the decline in primary-major declarations is a contrast. Where there has been growth in the Public Health Certificate is as a secondary major obtained along side another degree. Declaring second majors is a growing trend across the college so may be a reflection of the broader trend or could be a reflection of the fact that one can earn the certificate while progressing toward other Public Health degrees since all the required courses for the certificate are also required in the ASPH or BSPH.

Unit	Major	Headcount					5-Year Comparison	
		Fall 2015	Fall 2016	Fall 2017	Fall 2018	Fall 2019	Percent Change	Difference
Certificate in Public Health Program	Primary	15	4	2	2	9	(-40%)	(-6)
	Secondary	1	0	1	8	12	>100%	11
School of Science, Technology, Engineering, and Mathematics	Primary	385	439	478	523	569	48%	184
	Secondary	4	1	10	31	45	1025%	41
Diné College	Primary	1235	1337	1341	1392	1373	11%	138
	Secondary	11	1	25	50	68	518%	57
<i>*5-Year Comparison analyzes the difference in Year 1 (Fall 2015) and Year 5 (Fall 2019). Primary and Secondary refers to how a student chooses their programs of study. The Primary major refers to the student's main program of study and the Secondary major is the second program they choose to pursue. Diné College Primary and Secondary counts are based on students who are Degree Seeking. Non Degree Seeking, Dual Credit, and High School Concurrent students are excluded from the count.</i>								

As of Fall 2019, Public Health Certificate Students account for **1%** of the total student body enrollment and **3%** of the total students enrolled in the School of Science, Technology, Engineering, and Mathematics.

D.2 Demographics

In the Fall of 2019, 21 students had declared the Public Health Certificate (PHC) as their major. The ratio of full-time to part-time students was 10 to 11 which is similar to the college overall, though of the college population just over half of students are full-time rather than just under. The gender makeup is almost entirely female, all but one PHC major, unlike the college which, while female predominant, is only 2.23:1 female to male. The PHC population also differs in age distribution from the overall college population, while half of students in the college overall are traditional students (18-24) with another third 25-39, PHC majors are much more evenly distributed with the a little over one-third being 25-39, one third being traditional (18-24), and the remaining almost one-third being 40 or older. Student type almost perfectly reflects the college with three quarters being returning students, 20% being new first-time students, and the remaining 5% being new transfer students.

Below are the demographics of the **21** Cert. Public Health majors:

Full-Time/ Part-Time Status	Fall 2019	
	Program	Institution
Full-Time (N=10)	48%	55%
Part-Time (N=11)	52%	45%

**Students declared in the major who enrolled in 12 or more credits are identified as Full-Time students. Students declared in the major enrolled in 11 credits or less are identified as Part-Time students.*

Gender	Fall 2019	
	Program	Institution
Female (N=20)	95%	69%
Male (N=1)	5%	31%

Age Range	Fall 2019	
	Program	Institution
17 years old & younger (N=0)	0%	5%
18-24 years old (N=7)	33%	49%
25-39 years old (N=8)	38%	33%
40 years old & older (N=6)	29%	13%

Student Type	Fall 2019	
	Program	Institution
Returning Students (N=16)	76%	77%
New Transfer (N=1)	5%	6%
New First Time Students (N=4)	19%	17%
<i>*Student type refers to the students who transferred from an external institution, returned from the previous academic year, or are new to the Institution.</i>		

D.3 Graduates and Graduate Persistence

Between 2011 and the Spring of 2020, 76 individuals earned a Public Health Certificate (PHC). Seventy percent (53) also earned an Associate Degree of some type either along side or following completion of the PHC. The most common choice was AS in Public Health (55%) followed by the AS in Health Occupations (26%). Additionally, 6 students have gone on to complete a Bachelor's degree at Diné College, 5 in Public Health and 1 in Psychology.

Historical Degrees Awarded

The table below depicts the historical count of graduates in the Public Health Certificate program.

Degree	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Public Health Certificate	0	15	0	12	5	6	4	6	15	13

Program Graduate Persistence

Of the **76** students who graduated with a Public Health Certificate, **35** graduated with a higher degree, Associate or Bachelor. **34** PHC graduated with an Associate Degree and **6** Graduated with a Bachelor's Degree.

Degrees Conferred to PHC Graduates	Count
Bachelor	6
Bachelor of Science, Public Health	5
Bachelor in Psychology	1
Associate	47
Public Health w/Health Educ Socio-Cult Option	29
Health Occupation	14
Social & Behavioral Science	1
General Science	1
Biology	1
Health Occupation Option	1
Total	53

**Some PHC Graduates earned multiple AA,AS degrees.*

D.4 Graduate Survey

As part of the Academic Performance Review, an online survey (SurveyMonkey) invitation was sent to 49 graduates of the certificate with email information on file. Fourteen individuals completed and returned the survey for a response rate of 29%.

The first question asked, “how long did it take for you to complete the certificate,” with answers ranging from 1 Semester to 5 Semesters. One semester is only an option since the certificate can be earned using classes required as part of another degree so need only have the paperwork filed for graduation if the individual has completed the courses. The most common answer was 4 semesters or 2 years (50% of respondents) followed by 2 Semesters or 1 Year (29%).

	Count	Combined Count
1 Semester	1	1
2 Semesters	3	4
1 Year	2	
4 Semesters	1	7
2 Years	6	
5 Semesters	1	1

When asked about whether respondents were working at the time they earned the certificate, 9 (64%) indicated they were while 5 (36%) indicated not working.

Responses as to why individuals chose to pursue the certificate fell into four groups. The largest group (5, 36%) indicated they were in another program, like the Associate of Science in Public Health, and had earned the necessary credits so could celebrate a small milestone or put it on their resume. The next largest group (4, 29%) earned it as part of their employment. Three (21%) stated they wanted a degree in healthcare or a different perspective in health other than clinical care, with the final person saying it was simply a personal choice.

As the Public Health Certificate is required for the Community Health Representatives (CHR) on the Navajo Nation, respondents were asked if the PHC was required for their program? Among respondents, 43% (6) answered “yes” while 57% (8) answered “no.” This suggests that currently, the CHR requirement is not the primary driver of enrollment/graduation from the Public Health Certificate.

The follow-up question asked, which program was it required for? Six answered in a way that indicated with was not required (BS in Public Health (2), AS in Health Occupations (1), Wasn’t/NA (2), Irrelevant answer (1). Of the remaining eight, four individuals (50%) indicated the CHR program with an additional person pointing to their work in young children. The remaining three (38%) simply indicated Public Health which could refer to their enrollment in either the Associate or Bachelor of Public Health programs or they are working in Public Health.

When asked if respondents believed the certificate would help them in their jobs even if it was not required or would help them obtain employment, the responses to both questions were 100% affirmative.

In trying to understand if individuals were pursuing the certificate in its own right or secondary to another degree, the question was asked, “Did you end up with the courses that made up the Certificate, so you petitioned to get it?” The overwhelming majority (11, 79%) said they had the courses so petitioned for the certificate while three (21%) said they did not.

When asked about employment since earning the certificate, three (21%) had not obtained employment and three were in the same job (21%). Two individuals (14%) are CHRs though with the requirement that CHRs earn the certificate, there may be overlap with those still in the same job. Of the remaining six, two (14%) are research coordinators, two (14%) are contact tracers, and one each (7%) are a social worker and a home-health worker.

The final question of the survey inquired about other degrees the respondents have sought. Four (29%) indicated no additional degrees, one (7%) had been certified as a nursing assistant, and one (7%) provided an irrelevant answer. The remaining eight (57%) had earned either an associate degree or bachelor’s degree or both. Two each (25%) indicated just an Associate of Science Degree in Public Health or a Bachelor of Science Degree (no indication of major). The other four earned Associate of Science degrees in Public Health (3, 38%) or Health Occupations (1, 13%) then a Bachelor’s Degree in either Public Health (3, 38%) or Psychology (1, 13%).

E. Resources

E.1 Facilities/Library

The public health faculty currently offer all courses on Zoom with an online supplement using Blackboard as support software. Diné College recognizes the expansive demographics and varied educational needs of the Navajo Nation and realizes that the College must provide learning opportunities that are accessible beyond the physical campus and outside the regular scheduling of the traditional classroom. Courses offered through Diné College Distance Education provide a complete educational experience covering all the content comparable to the traditional classroom. To support success of students in courses utilizing distance education methods and technology, Diné College has created a standing Distance Education (DE) Committee that is composed of faculty representing all major academic divisions. The mission of the Distance Education Committee is to develop policies and promote practices that contribute to the quality and growth of distance education at Diné College. Diné College, through systematic review and oversight by Academic VP, Dean, Chairs, and a Distance Education Standing Committee, supervises and approves all distance education courses (online or ITV). Courses offered via distance education have the same rigor and expected outcomes of campus-based offerings and cultural appropriateness is taken into consideration. Distance education academic programs and course offerings shall be evaluated according to the evaluation procedures in effect for location-based courses. Additional assessments will be developed that are specific to features used in distance education delivery. The College's technology infrastructure supports the delivery of instruction utilizing distance education features, including the use of Zoom, Blackboard, ITV technology, and other technologies. The Diné College library and other College resources are coordinated among faculty and staff in support of online instruction and learning. On-going technical training, professional development, and assistance is provided for faculty utilizing distance education features as a part of their instruction so that faculty are able to provide high-quality distance education and are also able to support student use of technology.

Diné College library consists of four branches located at: Tsaile, Crownpoint, Shiprock and Tuba City. The state library is housed within the Crownpoint campus building. The resources provided by the library include housing newspapers, magazines and journals along with numerous general data bases and one specific data base – JSTOR. JSTOR is a specialized data base which provides access to relevant and current research articles pertinent to course work and research opportunities with the faculty. Writing guides for MLA and APA are accessible through the library as well as citation guidelines when writing term papers. Other resources that students may avail themselves of are: Learning Express Library for students and adults in order to achieve educational and career goals, and Peterson's Portal for educators and students alike. Peterson's portal for educators involves marketing, research and publishing. Students obtain skills such as career choices, resume' guide, essay assistance and college searches based on the individual and their major. EBSCOR Career Library is available for the students in order to plan their career and what resources are needed to support it. Another important resource is the Native Health Database maintained by the University of New Mexico Health Sciences Center. This is an online collection of articles on the health of American Indian populations that has quite a bit of fulltext articles, plus the significant feature that if fulltext is not available online at their site, it can be requested and will generally be received by the student or faculty member within 24 hours.

E.2 Research Environment

Diné College has had an active research program since 1978 with the original Minority Biomedical Research Support (MBRS) Program. MBRS funded a series of research projects for over 25 years. Other research support has come from the National Science Foundation, and the College is a current recipient of a large institutional enhancement award from the Tribal college and University Program (TCUP). That funding is supporting the implementation of the college's new BS in Biology as well as a large summer internship program for students in environmental science. Shiprock North campus has the most active research program, having received funding from the NIH National Cancer Institute to support faculty and student research training in cancer (in collaboration with Mayo Clinic), and USDA Equity funding to support Environmental Science research. USDA also funds evaluation research of gardening intervention projects conducted by Dr. Bauer. The Land Grant Office has additional USDA research grants and does a variety of environmental science research on the campus in Tsaile. Student research runs year-round and there are many existing, program level MOUs with nearby universities in New Mexico, Arizona and California. Tsaile campus has several faculty members involved in USDA sponsored research, particularly in botany. In addition, there is an active summer research program involving nearby Canyon de Chelly including several student internships provided by the National Park Service. There is funding by NASA to support a summer GIS intern program. The Tsaile campus has dormitories and lab facilities, including computer science, physics/engineering, biology, microbiology and chemistry lab, all in one building. The Shiprock North campus has modular lab facilities, with Chemistry, Biology and two cell biology research labs as well as a complete GIS facility. There is also a computer lab and numerous classrooms. Both Tsaile and Shiprock campuses have Learning Centers and Libraries. The College has an approved plan for a new Science Building with up-to-date labs for chemistry, biology and computer science, and computers dedicated to mathematics instruction.

Diné College's summer research internship programs have also built solid collaborations with a number of research projects on the Navajo Nation, notably by providing student researchers to projects conducted by Johns Hopkins University, and Brigham and Women's Hospital, among others. Students have been placed regularly with IHS and Navajo Nation health programs. Faculty members Bauer and Hartzell regularly serve on Navajo Nation task forces and steering committees in health areas, such as the Community Health Survey project (BRFSS-style surveillance survey), and the Navajo Nation Human Research Review Board. The College regularly manages the Navajo Research Conference for that Board, facilitating a large multi-day event that brings over 100 researchers to the reservation from universities and research institutes all over the U.S. and beyond.

E.3 Support Personnel

The College has established an Institutional Grants Office to administer the official Grants Policies of the college which are posted on the college website. Grant pre-award and post-award processing and monitoring are provided, including support for the College's Institutional Review Board. New grant management software is purchased and being adapted for our use. The Business Office maintains a dedicated Grants Accountant who works closely with PIs to monitor funding and remain in compliance with all regulations.

E.4 Computers

A wide area network provides networked computer resources for all six college campuses, allowing access to printer, scanners, processors, and the internet for students and faculty. Word processing, spreadsheet, database and statistical programming packages are available. Diné College Polycom capabilities support teleconference course instruction and conference calling accommodating callers from within and outside the College's wide area network. University faculty can be networked in to present in classes or confer on research. All six campus sites can be connected at a time for class delivery using Zoom. The College also provides Blackboard technology for online course delivery/enhancement.

The public health program also maintains a set of camcorders (8), Apple MacBook Air laptop computers (15), and Apple iPads (15) for use in a variety of courses and activities in video production for public health education and outreach. These are used by students in the Principles of Health Education course to create health promotion videos, and by high school and college students in the summer enrichment programs to create digital stories and to document speakers and activities. The program also maintains a Vimeo account for uploading and processing video products, and a Zoom account to facilitate small class sessions and online project meetings.

3.5 Other

All named faculty and staff have office space assigned. The space is sufficient for the proposed activities. The College maintains conference call lines for all departments to use as needed for meetings and communication. The office space and call lines have not been used since the pandemic, but faculty are reached by personal cell phones. There is a fleet of vehicles that can be available for transportation needs of the projects.

E.6 Faculty



Mark Bauer, PhD

Prior to my involvement in the school gardening intervention proposed here, I conducted survey research to assess gardening behaviors, needs, and readiness to change among individuals in the Navajo chapter areas where this proposed research will be conducted. One as yet unpublished finding of that survey is that gardeners in these communities consume two more servings of fruits and vegetables daily than those who are not gardening (by 24-hour dietary recall measure). An intervention to support home gardens for 30 families in these same areas has allowed piloting of pre/post measures of change in knowledge, confidence and behavior in gardening and healthy eating. This work, done in collaboration with the partners in this new proposed project (Lombard & Beresford), prepared me to participate in the evaluation of the impact of the proposed school garden project on participating families.

My ability to direct research efforts on the Navajo Nation has been established through over 35 years as a member of the Diné College faculty teaching in the Division of Science and Math. I developed a highly successful Summer Research Enhancement Program to teach public health research methods to undergraduate Navajo students and support their participation in internships in a variety of programs serving Navajo communities in areas of diabetes and cancer prevention, and promotion of wellness in general. In sixteen years this program has engaged more than 200 undergraduate American Indian students in learning and applying quantitative and qualitative research skills. Through the practicum placement of these students, I have developed trusted partnerships with tribal and IHS health programs. I have been a leader in expanding opportunities for Navajo students through course and program development in collaboration with research intensive institutions. I served on the Navajo Nation Human Research Review Board for 15 years, and also on several Navajo Division of Health-IHS-Diné College working committees designed to yield collaborative solutions to addressing the Navajo Nation's epidemiological and public health planning needs. I have conducted health research projects with NIH funding in areas of diabetes management and cancer screening, and with USDA funding in the area of nutrition, availability and affordability of health foods in trading posts and convenience stores on the reservation, the nutrition status of Head Start children using 24-hour dietary recall with their caregivers, and focus group research on barriers faced by parents of young children trying to provide nutritious meals to their families.



Carmella Kahn, MPH, DrPH

I have 13 years of experience and knowledge in working with American Indian and Alaska Native (AIAN) communities on community-based participatory research (CBPR) projects. In addition to my experience in CBPR projects, I also have experience mentoring undergraduate and high school students for the past 13 years through various roles as a community volunteer, teaching assistant, research assistant/associate, and as a formal mentor with the Native SOARS program at the University of Arizona in Tucson, AZ.

The research for my MPH and DrPH programs focused on AIAN food systems and strategies for urban gardening, improving healthy food security and healthy food access, including traditional AIAN food, with the Tucson Indian Center (TIC). I founded a grassroots organization called GROW NATIVE, comprised of eight AIAN community advisory board members, to investigate, navigate, and build upon urban food systems in Tucson, AZ to support AIAN families to eat healthy and use gardening as a key strategy to promote healthy living and address health disparities. During these community programs I included opportunities to mentor undergraduate and high school students to build capacity among community members. In addition to my dissertation research, I worked on other CBPR projects as a research associate for UA with the TIC for the past 10 years to investigate health topics such as diabetes, youth suicide prevention, and AIAN resilience and historical trauma. Mentoring youth and young adults was a huge component part of these projects. In 2017, I received the University of

Arizona Chad S. Marchand Award for Outstanding Community Service and Native American Leadership in recognition of the work I have led within the Tucson community.

I have knowledge and expertise in working with Navajo communities through my position as a public health faculty member at Diné College (2018-2020) and with the Diné College Summer Research Enhancement Program (SREP) (2015-2020). I teach public health courses, mentor students, and create curriculum with an indigenous focus using a Navajo-based paradigm. I also support the Diné College dual credit program with local high schools. With SREP, I serve the role of co-Director for our summer students to establish and maintain partnerships with mentors from health organizations based on the Navajo Nation such as Indian Health Service and the Navajo Nation Department of Health. We modified SREP for summer 2020 to offer it as an online program and helped our students create individual projects to investigate COVID-19 on the Navajo Nation. We utilized a mentoring model to ensure our students had guidance and support from instructors to carry out their research.

Christopher Dickerson, PhD

With degrees in Health Services Research, Policy, & Administration (PhD, MS - Minnesota) and Political Science (BA - Eastern Kentucky), I have a strong social science base in and around health care and health policy while my microbiology & human health oriented Biology degree (MS - Eastern Kentucky) ensures a strong foundation in disease process, spread, and control. When paired with my long association with health science & nursing-related instruction I am well suited to educating individuals in public health and health sciences.

With over a decade of experience, my heart is in teaching and mentoring students; taking information and conveying it to students of diverse backgrounds and ages in preparation for attaining their desired future goals. The courses I have taught have been varied, as expected given the broad, diverse background, and include, though not limited to, Research Methods & Design, Epidemiology, Introduction to Providing Healthcare (an examination of the U.S. healthcare system and policy), Global Health, Health & Disease (a pathophysiology course for undergraduate public health majors), Introduction to Public Health, Clinical Microbiology, Anatomy & Physiology, and Medical Terminology; teaching in both lecture and lab settings on main and extended campuses, including ITV simulcast, as well as on an individual level via e-mail through master's and doctoral dissertation consulting.

I have a strong desire to see students succeed both academically and in their chosen profession so keep up with current trends and try to continually incorporate that into my teaching as appropriate. Of course, a dedication to student success means being accommodating of challenges, whether of a health or personal nature, students sometimes face and yet firm when individuals attempt to improperly take advantage of the collegial atmosphere of higher education; a skill I have developed over my many years of experience in both undergraduate, at all levels, and graduate education.

Though a teacher, I am also well versed in the design and methodology of research in a variety of fashions. I personally have conducted both qualitative and quantitative research; collected primary data and examined secondary data; integrated large and disparate data sources for geographic analysis; conducted Quality Improvement analysis on a contract basis; and engaged in research in the social, healthcare, and biological sciences. In addition, I have consulted on or reviewed BA (Public Health), BS

(Biology), MS, MPH, PhD, DSN, & PsyD projects providing a strong base in the conduct of research broadly and of literature review both as a research method and for developing a foundation for research; thus teaching and encouraging critical thinking skills in students.

Ultimately, health and health-related education is about people; improving the lives of those around us. To that end I have strong interests in the health professions, health disparities, rural health, epidemiology & disease, health-research design, and the psychology & sociology of health and health care. Thus, I have consulted on a Maternal-Child Health Needs Assessment of the Navajo Nation conducted by Diné College, providing guidance and support around secondary data collection and interpretation. Furthermore, as research cannot be limited to the classroom, we must engage our communities and build bridges with others seeking to improve health, scholarship in translation and application. Health research not translated to practice and society is ultimately of limited value, so I seek to translate and educate; scholarship in application.

Sheldon Benally, MS

Mr. Benally is Navajo from Cove, Arizona. His clans are Kinlichini (Kinlichii'nii) (Red House People) born for Tabaaha (Tábaahá) (Water Edge People). His previous work includes participating in various research projects with the Dine' College Public Health Programs relating to diabetes, cancer, and STI/HIV prevention projects. He has also served as an adjunct instructor with Dine' College.

With his experience conducting research on the Navajo Reservation, Sheldon has gained experience with collecting necessary documents to present to the Navajo Nation Human Research Review Board, including presenting at local chapter houses seeking support through letters and resolutions. Sheldon also has experience working with HIV prevention and testing with UNM Truman Health Services. During his graduate program, he also worked for UNM Project ECHO with the NM AIDS Education and Training Center and the UNM Prevention Research Center working with the Teen Outreach Program at Laguna-Acoma High School.

Currently, Sheldon is working on a research project to increase physical activity in the Eastern part of the Navajo Reservation in several communities through the University of New Mexico Prevention Research Center. The project is titled "Healthy Places Healthy People" and the main focus is to assist in building walking/running trails for these communities. He is also a current Adjunct Faculty at Dine' College teaching a Health Education course. Sheldon has a BS degree in Biology and a M.S. degree in Community Health Education from the University of New Mexico.

Anne Semrau, MS RD, MS

With over 25 years of biology teaching experience, my goal as an instructor is to provide engaging and varied learning experiences that improve the quality of people's lives and enhance appreciation of the natural world. I have an MS in Environmental Science, a BS in Molecular Biology and am a Registered Dietitian. My work experience includes being a clinical dietitian, a program coordinator for the environmental group American Forests, and a laboratory scientist for the biotech industry.

E.7 Operating Budget

The personnel budget for the Public Health program supports three full-time faculty members:

- Bauer – generally supported 60% from School of STEM funding, 40% from grants
- Dickerson – has been supported 100% under Title III for 2020-2021 academic year
- Kahn – supported 50% from School of STEM funding, and 50% from Navajo NARCH Partnership

The Navajo NARCH Partnership (NIH funding) has a budget of approximately \$700,000 per year for four years (2017 – 2021), that supports faculty as listed above, a subcontract to NAU for collaborative activities including the development of a masters level public health degree for our students to pursue following our BS degree, as well as summer student enhancement activities and other support.

The Yéego School Gardening (NIH funding to NMSU with subcontract of \$37,000 per year for three years to DC's public health program and land grant office) to support 5% of Dr. Bauer, 5% of Professor Hartzell, and some other staff support.

The REACH grant to the COPE/Partners in Health program has a subcontract of \$37,000 per year for three years to the public health program for 20% of Professor Hartzell's time to work with the NNDOH to develop a CHW Certification program to provide for uniform workforce development credits and continuing education for the public health workforce.

F. Contributions to the Community

Collaborations with Navajo Nation Programs

The beginning of the Diné College program in Public Health dates to 2001 and the teaching of a Seminar in Public Health that was team-taught between the Navajo Division of Health (NDOH) and the College faculty. The need and desire for additional coursework in public health in the area was clearly established.

Under the leadership of Dr. Taylor McKenzie at the Navajo Division of Health a **Navajo NARCH** (Native American Research Center for Health) project was funded as a collaboration between **Diné College** and NDOH as well as with the University of Arizona. This project supported the first organizational meetings to develop the Associate of Science in Public Health degree at the College. The College secured additional funding from ATSDR and CDC to complete the curriculum design and the accreditation process.

Under an MOA with the **CHR Program** of the Navajo Nation Department of Health, Diné College developed a Certificate Program that has high numbers of graduates from the CHR program and strong participation also from the Health Education and Special Diabetes Programs. The program was based on an assessment of the educational needs and barriers of the CHRs in the program at that time. At least 75 CHRs have received the **Certificate of Public Health**, and many are also pursuing the Associate of Science in Public Health degree.

In 2016 and again in 2017 Diné College has taken the lead in developing additional **NARCH** proposals to the National Institutes of Health and the Indian Health Services for funding to support further development of research and student research training programs in collaboration with the Navajo Nation Department of Health and regional universities.

Dr. Mark Bauer, Diné College faculty, served as a member of the **Navajo Nation Human Research Review Board** from 2002 through 2018, contributing to the development of research policy and procedures. Diné College has facilitated the biannual **Navajo Research Conference** since 2011, with Dr. Bauer and staff chairing the conference steering committee, managing the finances, arranging the facilities and services, collecting the abstracts, designing the agenda and conducting the conference and its evaluation. The college also works with the IRB to arrange work sessions to develop policy and to coordinate with regional university IRBs.

In collaboration with the **Navajo Nation Breast and Cervical Cancer Program** and Mayo Clinic's Cancer Center, the College has conducted research with funding from the National Cancer Institute to determine if Navajo language materials and outreach will result in more cancer screening than the existing approach. A **Navajo Cancer Glossary** was developed, Navajo language materials, and digital stories by cancer survivors are all part of the approach. The materials are now being used by the BCCP.

Our **Summer Research Enhancement Program (SREP)** of 17 years collaborates with many of the programs and offices of the **Navajo Department of Health**, providing summer student interns trained in data analysis and research methods to assist in program activities and data summarizing and analysis for

reporting in such programs as the CHR program, Special Diabetes Program, Navajo Epidemiology Center, Navajo WIC, Public Health Nursing and the Breast and Cervical Cancer Prevention Program. This program has been reviewed and lauded by our own external evaluators and by collaborators at several universities. The long-term success of the Summer Research Enhancement Program in Public Health has resulted in partnerships with Centers of Excellence at NAU and at UColorado to provide greater opportunities to improve our program and to articulate our courses and connect our students to greater opportunities as they move on. This program has provided internship experiences to over 200 students since its inception in 2000.

In addition to SREP, our program has implemented the **Indigenous Summer Enhancement Program (ISEP)**. ISEP is a 1-week summer program that introduces public health research to high school students. The program is one of the main components of the Indigenous Public Health Certificate Program for high school students. Dual credit students complete a series of public health courses over two years to earn a certificate from the program.

Diné College has been represented by Dr. Mark Bauer on the Steering Committee for the **Navajo Nation Health Survey** (based on the national Behavioral Risk Factor Surveillance Survey) that has been conducted over the past five years by the **Navajo Epidemiology Center**. The results of the surveys are critical for planning health education and health promotion activities for all NNDOH programs.

Diné College is being represented by Kathryn Hartzell, public health faculty member, on a committee of the **Navajo Epidemiology Center** guiding the use of Pregnancy Risk Assessment Monitoring System (PRAMS) data to recommend improvements in maternal and child health.

The **Diné College HIV Outreach Program** coordinates regularly with the Navajo Nation Health Education program and collaborates with their own HIV/AIDS Prevention efforts in order to supplement the numbers of people receiving education on reducing their risk of contracting sexually transmitted disease and monitoring health status through anonymous testing and condom distribution.

USDA funding supports research on community needs and interests in gardening for improved health.

Navajo EPA partnering with the Diné Environmental Institute in monitoring and studying water and air quality as impacted by mining and power generation activities.

Mark Bauer is a member of the **Task Force on Genetic Research Policy**, specifically the Subcommittee on Education and Public Outreach, that has been authorized by the Navajo Tribal Council to develop a policy for how Navajo people can be involved in genetic research.

The College is a partner in research being conducted to assess the resulting improvement in indoor air quality as a result of the changeout of wood/coal burning stoves in up to 700 homes in the Shiprock Agency, funded through a legal settlement with the utility company associated with the powerplants in the area. Navajo EPA, U.S. EPA, the University of Colorado, and Diné College are collaborating in this study in which the indoor air quality is monitored for several days prior to, and several days after the residents' old stoves are replaced with newly designed stoves certified by EPA for burning either wood or coal, which is a very unique feature.

G. Appendices

Appendix A: Program Assessment Matrix

Appendix B: Assessment Prompts

Appendix C: Checklists 2015-2021

Appendix D: Faculty Biosketches or CVs

Appendix E: REACH Grant

Appendix F: Navajo NARCH Partnership Organizational Chart, 2017-2021

Appendix G: Indigenous Public Health Pathway - Course Flow Chart

Appendix H: ISEP Dual Credit Pathways to Health Professions Brochure

Appendix I: MOU Between Dine College and CHR/Outreach Program NNDOH

Appendix J: Certificate in Public Health_Dine College and University of Arizona

Appendix A: Program Assessment Matrix

	PSLO #1	PSLO #2	PSLO #3	PSLO #4
HEE 111	Mastered/ Assessed	Introduced	Introduced	Introduced
PUH 111	Introduced/ Reinforced	Mastered/ Assessed	Introduced/ Reinforced	Introduced/ Reinforced
PUH 170	Mastered	Mastered	Mastered/ Assessed	Introduced/ Reinforced
PUH 141	Mastered	Mastered	Mastered	Mastered/ Assessed
PUH 201	Mastered	Mastered	Mastered	Mastered/ Assessed
PUH 275	Mastered	Mastered	Mastered	Mastered/ Assessed

Appendix B: Assessment Prompts

Outcome #1: This outcome will use the answers to question 1 on the HEE 111 midterm.

Target #1: Using question 1 on the HEE 111 Midterm Exam, students will identify and describe factors that affect the health of communities on the Navajo Nation. 75% of students will earn 14 out of 20 points for these questions.

Source of evidence: Score of 14 pts or higher on 20 point midterm exam for question 1.

Artifact #1

HEE 111 Midterm Exam Question

1. There are many factors that affect the health of a community. List and define six factors that affect the health of a community. Describe how these factors have affected health here on the Navajo Nation

Outcome #2: Assessment will occur in PUH 111 with the final exam question number 10

Target #1: 70% of students in PUH 111 will demonstrate proficiency with a grade of 70% or higher for question 7.

Source of evidence: Score of 14 pts or higher on 20 point Final Exam Question 10

Artifact #2

1. Exam Question #10: The Diné Educational Philosophy (DEP) along with the three core function and ten Essential Services of Public Health can be seen as complimentary models of process. This question is worth 20 Points.
 - A. Define which of the ten essential services complement the four elements of the DEP Model.
 - a. Nitsáhákees
 - b. Nahat'á
 - c. Iná
 - d. Sihasin
 - B. If you were using the DEP to structure a public health program focusing on Teen Suicide Prevention, think of at least two activities to address teen suicide that you could do for each element of the DEP cycle.
 - a. Nitsáhákees
 - b. Nahat'á
 - c. Iná
 - d. Sihasin
 - C. Fill in the blank. Match the four elements of the DEP model with the 3 core functions.

3 core functions

Four elements of the DEP model (match to the 3 core functions)

- | | |
|-----------------------------|----------------|
| 1. Assessment _____ | a. Nitsáhákees |
| 2. Policy development _____ | b. Nahat'á |
| 3. Assurance _____ | c. Iiná |
| | d. Sihasin |

Outcome #3: This outcome will occur in PUH 170 and will use the cumulative score for Weekly Quiz #15.

Target #1: Students will identify vocabulary used by health professionals in health care services and public health programming. 75% of students will earn 23 out of 33 points on the quiz.

Source of evidence: Score of 23 pts or higher on 33 point Weekly Quiz #15.

Artifact #3

PUH 170 Quiz #15 Sample Questions

7. _____ medicine is a general term for practices and systems of health care that are used to supplement conventional, or Western, treatments.
9. A _____ is a physician who specializes in diagnosing and treating diseases and disorders with x-rays and other forms of radiant energy.
21. Match each definition with the correct word part.

Match	Question Items	Answer Items
d. -	a. <i>-graphy</i>	a. abdomen
b. -	b. <i>hemat/o</i>	b. blood
a. -	c. <i>lapar/o</i>	c. surgical incision
c. -	d. <i>-otomy</i>	d. the process of producing a picture or record
e. -	e. <i>phleb/o</i>	e. vein

Outcome #4: This outcome uses a certificate exit survey to ascertain confidence in student ability in public health practices. Questions that assess this outcome will be determined upon development of the survey.

Target #1: Exit survey in which students will evaluate their confidence in learning, evaluating, and performing public health sciences.

Source of Evidence: Exit survey of students graduating from the program and will be part of the end of semester graduation preparation at the end of the Spring 2020 semester.

Artifact #4

	<i>Strongly Agree (1)</i>	<i>Agree (2)</i>	<i>Neutral/ NA (3)</i>	<i>Disagree (4)</i>	<i>Strongly Disagree (5)</i>
1. My public health education at Diné College was excellent.	1	2	3	4	5
2. My public health education prepared me for transfer to a 4yr institution or the career of my choice.	1	2	3	4	5
3. My public health education at Dine' College has increased my <u>lab</u> skills.	1	2	3	4	5
4. My public health education at Dine' College has increased my <u>field</u> (community) skills.	1	2	3	4	5
5 My public health education at Dine' College has increased my ability to interpret data.	1	2	3	4	5
6. My public health education at Dine' College has increased my capability to make decisions about political issues.	1	2	3	4	5
7 My public health education at Dine, College has increased my awareness of public health issues.	1	2	3	4	5
8. My public health education at Dine' College has increased my awareness of environmental issues and my ability to make informed decisions.	1	2	3	4	5
9. My public health education at Dine' College has increased my capability to make informed decisions about everyday life/real world situations.	1	2	3	4	5
10. Traditional and western science were successfully integrated into my public health education at Dine' College.	1	2	3	4	5
11. <u>For A.S. Degree grads:</u> My math, chemistry, geology, and physics courses contributed to my competency in my major.	1	2	3	4	5
12. (Answer only if you have <u>participated in an internship</u> like SREP/Bridges/REU program/ other research program—otherwise <u>please leave blank</u>) The research experience increased my self-confidence and interest in science.	1	2	3	4	5

13. How has the knowledge you've gained from your public health courses contributed to your everyday life? If so, how?

14. Are you continuing your education? If so, what program (major, degree) and college/university? If not, has this degree helped you to gain employment? In what area(s)?

15. What feedback could you give the department to make your experiences better? (use back of sheet)

Appendix C: Checklists

2015 - 2016 Student Graduation Advisement Checklist (CT) Certificate Program				
STUDENT:		ID #:		Public Health 12 - 13 credits
ADVISOR:				
Course No & Title	Credit	Transfer	Grade	
PROGRAM REQUIREMENTS				
PUH 111 Intro to Public Health	3.0			<p>This certificate is jointly awarded by Dine' College and by the Mel and Enid Zuckerman College of Public Health at the University of Arizona.</p> <p>* Option A - calls for PUH 280 and one elective course chosen from the list provided, both of which can be taken during the regular academic year.</p> <p>** Option B - specifically applies these principles to the conduct of public health research through participation in the Summer Research enhancement program consisting of PUH 290 and PUH 297.</p>
PUH 270 Comm Health Assessmt/Plan	3.0			
(6 hrs)				
Choice of Option A or B:				
Option A:				
PUH 280 Implement & Eval of Public Health	3.0			
(3 hrs)				
and choose one (1) course from:				
EDU 200; BIO 170; BIO 201; HEE 110; HEE 111; NAV 231; PSY 111; PSY 240; PSY 250; PUH 200; SOC 111; SOC 225; SOC 230; PUH 241; or PUH 289				
	3.0			
(3 hrs)				
Option B:				
PUH 290 Pub Hlth Research Methods	4.0			
PUH 297 Pub Hlth Rsrch Mthds Pract	3.0			
(7 hrs)				
Program Credits: (12-13 hrs)				

2017 - 2018 Graduation Advisement Checklist (CT) Certificate Program				
STUDENT:		ID #:		Final, March 17, 2017 Public Health 12 - 13 credits
ADVISOR:				
Course No & Title	Credit	Transfer	Grade	
PROGRAM REQUIREMENTS				
PUH 111 Introduction to Public Health	3.0			<p>This certificate is jointly awarded by Dine' College and by the Mel and Enid Zuckerman College of Public Health at the University of Arizona. The courses are taught according to the Dine' Education Philosophy following the program development cycle of assessment, planning, implementation, and evaluation.</p> <p>* Option A - calls for PUH 280 and one elective course chosen from the list provided, both of which can be taken during the regular academic year.</p> <p>** Option B - specifically applies these principles to the conduct of public health research through participation in the Summer Research enhancement program consisting of PUH 290 and PUH 297.</p>
PUH 270 Community Health Assessment & Planning	3.0			
(6 hrs)				
Choice of Option A or B:				
Option A:				
PUH 280 Implement & Eval of Public Health	3.0			
(3 hrs)				
and choose one (1) course from:				
EDU 200; BIO 170; BIO 201; HEE 110; HEE 111; NAV 231; PSY 111; PSY 240; PSY 250; PUH 200; SOC 111; SOC 225; SOC 230; PUH 241; or PUH 289				
	3.0			
(3 hrs)				
Option B:				
PUH 290 Public Health Research Methods	4.0			
PUH 297 Public Health Research Methods Pract	3.0			
(7 hrs)				
Program Credits: (12-13 hrs)				

**2018 - 2019 Advisement Checklist
(CT) Certificate Program**

STUDENT:		ID #:		<i>Final, Dec 13, 2018</i> Public Health Certificate 12 credits	
ADVISOR:					
Course No & Title	Credit	Transfer	Grade		
PROGRAM REQUIREMENTS					
HEE 111 Personal and Community Health	3.0				
PUH 111 Introduction to Public Health	3.0				
BIO/PUH 170 Medical Terminology	3.0				
<i>(9 hrs)</i>					
<i>Choose one (1) course from:</i>					
PUH 141 Nutrition for Health	3.0				
PUH 201 Principles of Environmental Public Health	3.0				
PUH 275 Health Services and Policy	3.0				
<i>(3 hrs)</i>					
Program Credits: (12 hrs)					

This certificate is jointly awarded by Dine' College and by the Mel and Enid Zuckerman College of Public Health at the University of Arizona.

**Advisement Checklist for 2019 - 2020
(CT) Certificate Program**

STUDENT:		ID #:		Public Health 12 credits	
ADVISOR:					
Course No & Title	Credit	Transfer	Grade		
PROGRAM REQUIREMENTS					
HEE 111 Personal and Community Health	3.0				
PUH 111 Introduction to Public Health	3.0				
BIO/PUH 170 Medical Terminology	3.0				
<i>(9 hrs)</i>					
<i>Choose one (1) course from:</i>					
PUH 141 Nutrition for Health	3.0				
PUH 201 Principles of Environmental Public Health	3.0				
PUH 275 Health Services and Policy	3.0				
<i>(3 hrs)</i>					
Program Credits: (12 hrs)					

This certificate is jointly awarded by Dine' College and by the Mel and Enid Zuckerman College of Public Health at the University of Arizona.

Advisement Checklist for 2020 - 2021

Certificate

STUDENT: _____ ID #: _____				Public Health 12 credits																																															
ADVISOR: _____																																																			
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 60%;">Course No & Title</th> <th style="width: 10%;">Credit</th> <th style="width: 10%;">Transfer</th> <th style="width: 20%;">Grade</th> </tr> </thead> <tbody> <tr> <td colspan="4" style="background-color: #e0e0ff; text-align: center;">PROGRAM REQUIREMENTS</td> </tr> <tr> <td>HEE 111 Personal and Community Health</td> <td style="text-align: center;">3.0</td> <td></td> <td></td> </tr> <tr> <td>PUH 111 Introduction to Public Health</td> <td style="text-align: center;">3.0</td> <td></td> <td></td> </tr> <tr> <td>BIO 170/PUH 170 Medical Terminology</td> <td style="text-align: center;">3.0</td> <td></td> <td></td> </tr> <tr> <td colspan="4" style="text-align: right; padding-right: 10px;">(9 hrs)</td> </tr> <tr> <td colspan="4" style="padding: 5px;"> <i>Choose one (1) course from:</i> </td> </tr> <tr> <td>PUH 141 Nutrition for Health</td> <td style="text-align: center;">3.0</td> <td></td> <td></td> </tr> <tr> <td>PUH 201 Principles of Environmental Public Health</td> <td style="text-align: center;">3.0</td> <td></td> <td></td> </tr> <tr> <td>PUH 275 Health Services and Policy</td> <td style="text-align: center;">3.0</td> <td></td> <td></td> </tr> <tr> <td colspan="4" style="text-align: right; padding-right: 10px;">(3 hrs)</td> </tr> <tr> <td colspan="4" style="text-align: right; padding: 10px;"> <div style="border: 1px solid black; display: inline-block; padding: 2px 10px;">Program Credits: (12 hrs)</div> </td> </tr> </tbody> </table>					Course No & Title	Credit	Transfer	Grade	PROGRAM REQUIREMENTS				HEE 111 Personal and Community Health	3.0			PUH 111 Introduction to Public Health	3.0			BIO 170/PUH 170 Medical Terminology	3.0			(9 hrs)				<i>Choose one (1) course from:</i>				PUH 141 Nutrition for Health	3.0			PUH 201 Principles of Environmental Public Health	3.0			PUH 275 Health Services and Policy	3.0			(3 hrs)				<div style="border: 1px solid black; display: inline-block; padding: 2px 10px;">Program Credits: (12 hrs)</div>		
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This certificate is jointly awarded by Dine' College and by the Mel and Enid Zuckerman College of Public Health at the University of Arizona.

Appendix D: Faculty Biosketches or CV's

Faculty name: Carmella Kahn

INSTITUTION AND LOCATION	DEGREE <i>(if applicable)</i>	Completion Date MM/YYYY	FIELD OF STUDY
University of Arizona	B.S.	05/07	Microbiology
University of Arizona	M.P.H.	08/10	Public Health-Maternal and Child Health
University of Arizona	DrPH	08/18	Public Health-Maternal and Child Health

A. Personal Statement

I have 13 years of experience and knowledge in working with American Indian and Alaska Native (AIAN) communities on community-based participatory research (CBPR) projects. In addition to my experience in CBPR projects, I also have experience mentoring undergraduate and high school students for the past 13 years through various roles as a community volunteer, teaching assistant, research assistant/associate, and as a formal mentor with the Native SOARS program at the University of Arizona in Tucson, AZ.

The research for my MPH and DrPH programs focused on AIAN food systems and strategies for urban gardening, improving healthy food security and healthy food access, including traditional AIAN food, with the Tucson Indian Center (TIC). I founded a grassroots organization called GROW NATIVE, comprised of eight AIAN community advisory board members, to investigate, navigate, and build upon urban food systems in Tucson, AZ to support AIAN families to eat healthy and use gardening as a key strategy to promote healthy living and address health disparities. During these community programs I included opportunities to mentor undergraduate and high school students to build capacity among community members. In addition to my dissertation research, I worked on other CBPR projects as a research associate for UA with the TIC for the past 10 years to investigate health topics such as diabetes, youth suicide prevention, and AIAN resilience and historical trauma. Mentoring youth and young adults was a huge component part of these projects. In 2017, I received the University of Arizona Chad S. Marchand Award for Outstanding Community Service and Native American Leadership in recognition of the work I have led within the Tucson community.

I have knowledge and expertise in working with Navajo communities through my position as a public health faculty member at Diné College (2018-2020) and with the Diné College Summer Research Enhancement Program (SREP) (2015-2020). I teach public health courses, mentor students, and create curriculum with an indigenous focus using a Navajo-based paradigm. I also

support the Diné College dual credit program with local high schools. With SREP, I serve the role of co-Director for our summer students to establish and maintain partnerships with mentors from health organizations based on the Navajo Nation such as Indian Health Service and the Navajo Nation Department of Health. We modified SREP for summer 2020 to offer it as an online program and helped our students create individual projects to investigate COVID-19 on the Navajo Nation. We utilized a mentoring model to ensure our students had guidance and support from instructors to carry out their research.

B. Positions and Honors

A. Positions

2007-2008 Instructional Specialist, Health Promotional Sciences, Mel & Enid Zuckerman College of Public Health, University of Arizona, Tucson, AZ
 2007-2009 Consultant (chaperone), Tohono Land Connections Youth Program, Tohono O'odham Community College, Sells, AZ
 2008 Research Technician, Health Promotional Sciences, Mel & Enid Zuckerman College of Public Health, University of Arizona, Tucson, AZ
 2008-2010 Graduate Research Assistant, Health Promotional Sciences, Mel & Enid Zuckerman College of Public Health, University of Arizona, Tucson, AZ
 2010 Consultant, Tohono O'odham Nation Dept. Health & Human Services, Sells, AZ
 2010-2011 Graduate Teaching Assistant, Health Promotional Sciences, Mel & Enid Zuckerman College of Public Health, University of Arizona, Tucson, AZ
 2013-2016 Graduate Research Assistant, Health Promotional Sciences, Mel & Enid Zuckerman College of Public Health, University of Arizona, Tucson, AZ
 2016 Consultant, Tucson Indian Center, Tucson, AZ
 2016-2017 Teaching Assistant, Diné College Summer Research Enhancement Program, Tsailé, AZ
 2018 Research Assistant, Northern Arizona University, Flagstaff, AZ
 2018-2020 Public Health Instructor, Diné College, Shiprock, AZ
 2019, 2020 Co-Director, Diné College Summer Research Enhancement Program, Tsailé, AZ

Other Experience and Professional Memberships

2004-2010 Member, American Indian, Alaska Native and Native Hawaiian Caucus-APHA
 2004-2010 Member, American Public Health Association
 2014-2015 Member, Native Research Network
 2009-2015 Member, Board of Advisors, GROW NATIVE
 2015-2016 Member, American Public Health Association
 2017-2018 Member, Arizona Public Health Association
 2019-2020 Member, Society for Advancement of Chicanos/Hispanics and Native Americans

Selected Honors

2009 Reva T. Frankle award, Mel and Enid Zuckerman College of Public Health
 2010 Zuckerman Family Foundation Scholarship, MEZCOPH
 2008-2013 Gates Millennium Scholar, Wm. F. Gates Foundation
 2014-2017 American Indian Alumni Scholarship
 2014 Bruce and Jane Ash Scholarship, Mel and Enid Zuckerman College of Public Health

2015 National Congress of American Indian Native Graduate Health Fellow
 2016 Ft. McDowell Wassaja Memorial Scholarship
 2017 Dr. Maria Teresa Velez-Marshall Foundation Graduate Fellowship
 2017 University of Arizona Chad S. Marchand Award for Outstanding Community Service and Native American Leadership

C. Contributions to Science

1. Indigenous Food Systems. During my MPH program, I was the Principal Investigator of a 5-year grant from the University of California, Berkeley Community Forestry & Environmental Research Partnerships. My project, *GROW NATIVE: Gardening Resources and Opportunities with Native American Teachings, Indigenous Views and Education*, was a collaborative pilot gardening intervention with the TIC for urban AIAN youth to increase healthy food choices and knowledge in gardening. I worked with a community advisory board to develop, implement, and evaluate the project and we also conducted a formative assessment. I was responsible for managing the grant, training and hiring staff, and recruiting participants. I have also worked as a Research Assistant on the CBPR project, Seeds of Wellness (SOW), an NIH funded lifestyle intervention project for AIAN families. I assisted in curriculum development and facilitation of the healthy and traditional foods component.

- a. **Kahn CB.** Investigating urban American Indian food systems: Challenges and opportunities to promote access to healthy foods and food security through gardening. 2017 AzPHA Spring Conference: Connecting Community Design and Public Health, Phoenix, AZ.
- b. **Kahn CB.** Tucson Indian Center Community Engaged Research Partnerships. AZ Biomedical Research Conference: Building Community-Engaged Health Research Partnerships 2017, Tucson, AZ.
- c. **Kahn-Thornbrugh CB, Kahn-Thornbrugh CC.** GROW NATIVE: A community-based gardening and wellness project for urban American Indian youth. 2010 International Network of Indigenous Health Knowledge and Development Conference, Poulsbo, WA.
- d. **Kahn-Thornbrugh CB.** Incorporating traditional native food into a nutritional food curriculum for a family-based wellness intervention for urban American Indians. 2009 137th Annual American Public Health Association Conference, Philadelphia, PA.

2. Indigenous Youth and Young Adults. I have 13 years experience working with urban AIAN youth and young adults. I worked as a Research Assistant on the CBPR project, the Native American Youth Empowerment Project (NAYEP), a SAMHSA funded substance abuse and HIV/AIDS prevention project. I was trained to interview youth, ages 12 years old to 18 years old, in sensitive topics such as suicide and substance abuse, and also facilitated the sessions for promoting healthy living and coping skills through a cultural-based curriculum. We worked collaboratively with local youth programs and schools to recruit the youth. As the PI of the GROW NATIVE project I developed and implemented a youth gardening curriculum for youth ages 12 years old to 18 years old to promote healthy foods and physical activity, skills and knowledge in Native science, and interest in attaining higher education in STEM and health related fields. We worked with a local organization serving urban AI youth to recruit the youth at community-based events and through local youth organizations. I have also worked as a consultant for the Tohono O'odham Nation Dept. Health & Human Services to co-facilitate a

summer week-long suicide and substance abuse prevention workshop for youth ages 10-18 years old. Additionally, I also served as an AIAN youth chaperone three summers for the Tohono O'odham Community College Tohono Land Connections Program, a youth program that promoted STEM careers and education among high school students. My current work with the Diné College Summer Research Enhancement Program has included developing mentoring modules for mentors at the student internship sites and for students to understand their roles and expectations as mentees.

- a. **Kahn CB.** Exploring American Indian students' resilience through digital storytelling in the Diné College Summer Research Enhancement Program curriculum. 26th National Native Health Research Conference 2016, Cherokee, NC.
- b. **Kahn CB.** Champions of health on the horizon: supporting academic persistence and success among American Indian and Alaska Native public health graduate students. 2017 Native American Research and Training Center Winter Institute, Tucson, AZ.
- c. **Kahn, C. B.** Dine College Summer Research Enhancement Program Mentors Modules. [Training Modules]. Tsale, AZ: Summer Research Enhancement Program; 2015. Available from: <http://www.dinecollege.edu/institutes/SREP/mentors-modules.php>
- d. **Kahn-Thornbrugh CB.** Using creative expression to prevent substance abuse and HIV among American Indian youth. 2011 Pathways into Health 5th Annual Conference, Tucson, AZ.

3. American Indian Resilience and Mental Health. I have previously worked as a Graduate Research Assistant for a CBPR project, *Documenting and Promoting Resilience in Urban American Indians*, and have gained experience in research design, implementation, and evaluation. I helped develop the resilience curriculum for AIAN youth in the targeted age range of 12 to 18 years old, and helped the PI's of the project pilot test the curriculum with youth from local high schools in Tucson, AZ. Our work through this project lead to the publication of three important manuscripts that investigated urban AIAN elders' resilience as a source for youth to develop their resilience in urban settings.

- a. **Kahn, C. B.,** Reinschmidt, K., Teufel-Shone, N. I., Ore, C. E., Henson, M., & Attakai, A. (2016). American Indian Elders' resilience: Sources of strength for building a healthy future for youth. *American Indian and Alaska Native Mental Health Research*, 23(3), 117-133.
- b. Reinschmidt, K., Attakai, A., **Kahn, C. B.,** Whitewater, S., & Teufel-Shone, N. I. (2016). Shaping a stories of resilience model from urban American Indian elders' narratives of historical trauma and resilience. *American Indian and Alaska Native Mental Health Research*, 23(3), 117-133.
- c. Whitewater, S., Reinschmidt, K. M., **Kahn, C,** Attakai, A., & Teufel-Shone, N. I. (2016). Flexible roles for American Indian elders in community-based participatory research. *Preventing Chronic Disease*, 13.
- d. **Kahn-Thornbrugh CB.** Resilience through the worldview of urban American Indian elders: Community to individual level factors for strengthening family and parenting practices. 6th Biennial International Indigenous Development Research Conference 2014, Auckland, New Zealand.

D. Additional Information: Research Support and/or Scholastic Performance

Ongoing Research Support

5S06GM12350-02
01/18/18-current

Bauer & Teufel-Shone (PI)

NIMHD

Student Enhancement Project (SEP). This aim of SEP Is to conduct high school outreach and create dual credit programs with Dine College as well as a summer research opportunity for high school students to introduce them to health profession careers. The aim also includes building the bachelor of science program in public health at Dine College by developing courses and curriculum that support increasing the public health workforce on the Navajo Nation. Lastly, the aim includes developing and supporting an MPH Indigenous Health track at Northern Arizona University and building an academic partnership between NAU and Dine College.

Completed Research Support

P20 MD 006872 Sanderson & Teufel-Shone (PI) 08/26/12-08/27/17

NIMHD

Research Training & Education Core. This core is under the Center for American Indian Resilience.

The aim of the core is to use a summer research enhancement program to guide the exploration of resilience models among AI college students at the University of Arizona, Northern Arizona University, and Dine College.

Roles: Graduate Research Assistant. Mills-Cager & Becenti (PI) 10/01/15-5/30/16

Notah Begay III Foundation 2015 “Seeds of Native Health” Capacity Building Grant

Tucson Indian Center

Finding strengths in the local food environment to promote healthier food consumption among American Indian community members in Tucson. This project Identified strategies and recommendations to address childhood obesity and type 2 diabetes in the urban community. Final deliverable was development of an action plan for long term planning.

Role: Grant writer and consultant

P20 MD 006872 Attakai & Reinschmidt (MPI) 01/18/13-02/24/15

NIMHD

Documenting and Promoting Resilience in Urban American Indians.

The goal of this small research project, funded under the Center for American Indian Resilience, was to document and disseminate resilience strategies to cope with historical trauma. The activities included collecting AI elders' life narratives, design 12 monthly workshops for AI youth using the narratives, and implement and evaluate the workshops.

Role: Graduate Research Assistant

Kahn-Thornbrugh (PI)

09/25/10-5/16/14

Community Forestry & Environmental Research Partnerships UC Berkeley

Gardening to improve eating choices and physical activity among American Indians.

The goal of the project is to create a collaborative partnership between the UA MEZCOPH, the Tucson Indian Center, and urban American Indian community members to develop, implement, and evaluate a community-based gardening and wellness project for American Indian families in Tucson, AZ.

Faculty name: Anne Semrau

MS RD, M.S. Antioch New England, Environmental Studies; B.S. University of Texas, Molecular Biology; Registered Dietitian.

With over 25 years of biology teaching experience, my goal as an instructor is to provide engaging and varied learning experiences that improve the quality of people's lives and enhance appreciation of the natural world. I have an MS in Environmental Science, a BS in Molecular Biology and am a Registered Dietitian. My work experience includes being a clinical dietitian, a program coordinator for the environmental group American Forests, and a laboratory scientist for the biotech industry.

Professional Experience

- Educator: 1993-present.
- Clinical Dietitian: 2014-2016.
- American Forests Program Coordinator: 1991-93.
- Molecular Biologist: 1986-1989

Certifications and Honors

- Registered Dietitian, registration number 1100356.
- ServSafe Food Protection Manager Certification.
- Texas Master Naturalist Certification.
- University of Texas: Special Honors in Zoology; Junior Fellow; Welch Foundation Fellowship; College Scholar.

Education

- Dietetic Internship, Texas State University, 2013-2014.
- Didactic Program in Dietetics, Kansas State University, 2010-2013.
- M.S. in Environmental Studies, Antioch New England Graduate School, 1990-1992.
- NIH Fellowship, Molecular Biology, University of California, Berkeley, 1985-1986.
- B.S. in Molecular Biology, University of Texas at Austin, 1980-1984.

Professional Development & Affiliations

- GLOBE project training, Summer 2019.
- Costa Rica International Research Experience, December 2018.
- AISES advisor, attended 2017 Conference.
- Plant Healers, attended 2017 conference.
- Wilderness First Aid, NOLS, 2017.
- Albuquerque Herbalism, classes in ecological herbalism, 2016-2018.
- Student at Dine' College, courses in Navajo Herbology, Foundations of Navajo Culture, Navajo Healing, 2016-2017.
- Member, American Dietetic Association, 2010 –2020. Texas Dietetic Association, 2010 –2016.
- Member, Texas Association of Biology Teachers, 2010 –2016.

Volunteer Experiences

- Titus Regional Medical Center, volunteer in Food and Nutrition Services Department, 2011-2013.
- Texas Stream Team, Water Quality Monitor, 2010-2012.
- Forest Service EDRR Program, 2010 - 2013.

Publications

- Course Related Materials prepared for classes: Environmental Science Lab Book, General Biology 1 Lab Book, General Biology 2 Lab Book, Nutritional Analysis Workbook, Human Anatomy & Physiology Lab Book, Cell Biology Lab Book.
- "Building New Partnerships," Urban Forests, Aug./Sept. 1993,
- "Digging Deeper into the Urban Forest," Urban Forests, June/July 1993,
- "Helping Trees Weather Nature," Urban Forests Feb./Mar. 1993,
- "A New Look for Seven Cities," Urban Forests Feb./Mar. 1993,
- "Planting and Painting the Town," Urban Forests Aug./Sept. 1992,
- "Introducing Cool Communities," American Forests July/Aug. 1992,
- "The Effect of Introns on Gene Expression in Maize Protoplasts," A. Semrau and R. Sinibaldi, Poster Session, Journal of the American Society for Cell Biology, 1989.

Mark C Bauer
Curriculum Vitae
Diné College
(505) 368-3589
mcbauer@dinecollege.edu

CURRENT POSITION

Faculty Member, Public Health, School of STEM, Diné College

EDUCATION

1983 - Ph.D. Anthropology Department, Northwestern University
Dissertation: Navajo Conflict Management
1973 - M.A., Anthropology Department, Northwestern University
1971 - B.A. with Honors, Anthropology Department, Ohio State University

ACADEMIC EMPLOYMENT

1980-1981	<u>Adjunct Faculty Member</u> , Extension Program and Consultant, Research & Development Office Diné College (formerly Navajo Community College), Shiprock, NM. I taught math in Red Valley and at Navajo Mine (then Utah International) and worked on a Title III grant to develop Navajo research training modules.
1981-present	<u>Faculty Member</u> , Science, Mathematics and Technology, Diné College (formerly Navajo Community College), Shiprock, NM. Forty year career building academic programs at this tribal college.
1985	<u>Summer Session Faculty, Northwestern University</u> , as Assistant Director of the Field School in Cultural and Linguistic Anthropology (on the Navajo Reservation). I assisted Professor O. Werner of Northwestern University in teaching and mentoring a group of undergraduate and graduate students in research projects across Navajo Nation.
2004-2009	<u>Adjunct Faculty, University of New Mexico</u> , Public Health/Biostatistics I participated in the planning and implementation of a project to offer an entire MPH degree from UNM to a cohort of Indian Health Service employees in the Northern Navajo Agency. In addition to serving on the planning committee, I also conducted intensive math sessions in College Algebra topics and taught the graduate level Biostatistics course for this cohort.

PUBLICATIONS

Sugarman, J.R., **Bauer, M.C.**, Barber, E., Hayes, J., Hughes, J. 1993. Factors Associated with Failure to Complete Treatment for Diabetic Retinopathy Among Navajo Indians. Diabetes Care, Vol. 16, Supplement 1.

Wright, A., **Bauer, M.C.**, Clark, C. & Morgan, F., Begishe, K. (1993). Cultural Interpretations and Intracultural Variability in Navajo Beliefs About Breastfeeding. *American Ethnologist*, 20(4), 781-796.

Wright, Anne L., Clarina Clark & **Mark C. Bauer**. (1993). Maternal Employment and Infant Feeding Practices Among the Navajo. *Medical Anthropology Quarterly*, 7(3), 260-80.

Bauer, Mark C. & Anne L. Wright. (1996). Integrating Qualitative and Quantitative Methods to Model Infant Feeding Behavior Among Navajo Mothers. *Human Organization*, 55(2), 183-92.

Wright, AL, Naylor A, Wester, R, **Bauer M**, & Sutcliffe E. (1997). Using Cultural Knowledge in Health Promotion: Breastfeeding Among the Navajo. *Health Education & Behavior*, Vol. 24(5): 625-639 (October 1997).

Wright, AL, **Bauer M**, Naylor A, Sutcliffe E & Clark L. (1998). Increasing breastfeeding rates to reduce infant illness at the community level. *Pediatrics*, 101(5):837-844.

Bauer, Mark, Shorty, Marvin, Agbolooso, Emmanuiel, & Pareo-Tubbeh, Shirley. The Variety, Affordability, and Availability of Healthful Foods at Convenience Stores and Trading Posts on the Navajo Reservation. *Researh and Evaluation Activities in USDA*, 2001, Vol. 13, No.1.

Epple C, Wright AL, Joish VN & **Bauer MC**. (2003). The Role of Active Family Nutritional Support in Navajos' Type 2 Diabetes Metabolic Control. *Diabetes Care*, 26(10), 2829-34.

Cunningham-Sabo, L, **Bauer, M**, Pareo, S., Phillips-Benally, S., Roanhorse, J. & Garcia, L. (2008). Qualitative Investigation of Factors Contributing to Effective Nutrition Education for Navajo Families. *Maternal and Child Health Journal*, 12(Sup 1), 68-75.

Garrison, Edward R. **Bauer, Mark C.**, Hosley, Brenda L., Patten, Christi A. , Hughes, Christine A., Trapp, Mary A., Petersen, Wesley O., Austin-Garrison, Martha, Bowman, Clarissa N., & Veirkant, Robert A. (2010). Development and Pilot Evaluation of a Cancer-Focused Summer Research Education Program [for] Navajo Undergraduate Students. *Journal Cancer Education*, 25(4), 650-8. PMID: PMC2992578

Hughes, C.A., **Bauer, M.C.**, Horazdovsky, B.F. et al. Development and Pilot Evaluation of Native CREST—a Cancer Research Experience and Student Training Program for Navajo Undergraduate Students. *J Canc Educ* (2013) 28: 92. <https://doi.org/10.1007/s13187-012-0417-1>.

Kathleen Yost (Mayo Clinic), **Mark Bauer**, Linda Garcia, Christine Hughes (Mayo Clinic), and Christi Patten (Mayo Clinic). (2016). Adapting a Cancer Literacy Measure for Use among Navajo Women. *Journal of Transcultural Nursing* 1–8.

Avita, S., **Bauer M**, & Garcia, L An Intervention to Promote Navajo Gardening, Nutrition, and Community Wellness.(2016). *Journal of Health Disparities Research and Practice* Volume 9, Special Edition 1, 2016, The Pursuit of Young Researchers: NIDDK STEP-UP.

Mark Bauer. Connection and Community: Diné College Emphasizes Real-World Experience in Public Health. *Tribal College Journal*, Vol. 27, No.4, Summer 2016.

Hartzell, Kathryn & **Mark Bauer.** Public health education in a tribal college setting: description of a BSc programme at Navajo Nation Tribal College, New Mexico, USA. *The Lancet Global Health*, March 2019, Vol.7, ppS26-S26.

Sinicrope, Pamela; **Bauer, Mark**; Patten, Christi; Austin-Garrison, Martha; Garcia, Linda; Hughes, Christine; Bock, Martha; Decker, Paul; Yost, Kathleen; Petersen, Wesley; Buki, Lydia; Garrison, Edward. (2020). Development and Evaluation of a Cancer Literacy Intervention to Promote Mammography Screening among Navajo Women: A Pilot Study. *American Journal of Health Promotion* DOI: 10.1177/0890117119900592.

Wright, Anne and **Mark C. Bauer.** 1992. The Social Context of Navajo Infant Feeding Behaviors. In *Mechanisms Regulating Lactation and Infant Nutrient Utilization*. Wiley-Liss Publishing Co., New York.

AWARDS AND HONOURS

1967-1971	Alfred P. Sloan Foundation Scholarship.
1971	Phi Beta Kappa Scholastic Honorary.
1971-1972	Northwestern University Fellowship.
1987	Award for Outstanding Faculty Member 1986-87 Navajo Community College.
2003	Recognition for commitment to Navajo Studies, Presented at the Fourteenth Annual Navajo Studies Conference, April 2003.
2005	Faculty of the Year, Dine College.
2010	Training Award given by the <u>Native Research Network</u> “to recognize the training program that demonstrates excellence in recruiting, retaining and training Native investigators to engage in Native Health Research” regarding the Summer Research Enhancement Program that I developed and sustained annually since Summer 2000.
2015	Faculty Member of the Year, Diné College, Award from American Indian College Fund
2019	Faculty Member of the Year, Diné College, Award from School of STEM

INVITED TALKS

2006 “Development of Associate of Science Degree Program in Public Health at Diné College” and “Student Research Mentoring at Diné College.” United Tribes Technical College, Bismark, ND. Day-long set of presentations on Diné College programs provided to faculty and staff of several of the northern tribal colleges.

2009 “Development of Associate of Science Degree Program in Public Health at Diné College.” U.S. Department of Health & Human Services, Taskforce on Public Health in the Undergraduate Curriculum. Conference Call. September 8.

2019 “Establishing a Bachelor Degree Program in Public Health.” American Indian Higher Education Consortium: TCU Conclave: Embedding Behavioral Health/Health-Related Research Knowledge and Skills into the Curriculum. Tucson, AZ. January 3, 2019.

Invited presentation to symposium of tribal college faculty for
<http://www.aihec.org/our-stories/healthWellness.htm>

2019 “Enhancing Program Evaluation with College Student Interns: Experience of Diné College’s Summer Research Enhancement Program.” Colorado Area Health Education Center. Flagstaff, AZ. May 26.

CONFERENCES

Conferences Organized

2011, 2013, 2015, 2017, 2019 Navajo Research Conference, convened by the Navajo Nation Human Research Review Board and Diné College, with Steering Committee led by Mark Bauer with conference Call for abstracts, Registration, Agenda, publicity, facility, and all organization run by Diné College. Window Rock, Navajo Nation.

2008, 2009 Community Research Conferences held at Shiprock, NM, Kayenta, AZ, and Tuba City, AZ to bring researchers who conducted studies in these Navajo communities back to present results directly to the Navajo people.

April 8 – 9, 2019. Hantavirus Conference 2019. Diné College, Tsaile, AZ. This conference convened by Diné College’s Navajo NARCH together with the Navajo Epidemiology Center, and attracted many of the tribal health programs, Indian Health Services, state health departments, and regional health care organizations to hear the latest information about this illness and

TEACHING EXPERIENCE

University – Undergraduate

1. Mathematics –
MTH 011 Arithmetic
MTH 051 Beginning Algebra
MTH 100 Intermediate Algebra
MTH 110 College Algebra
MTH 213 Statistics

From 1980 until the approximately 2005 I taught 2 to 3 courses in mathematics every semester here at Diné College. These courses included Arithmetic, Beginning Algebra, Intermediate Algebra, College Algebra, and Statistics. I also taught the mathematics teaching methods course for teachers once. I continued teaching the statistics course every year until 2015.

2. Computer Science – Starting also in 1980, based on coursework I did as an undergraduate engineering major, I began offering courses in computer science, starting with Microcomputers, then Word Processing, Introduction to Computers, and Programming in Basic. I taught an Introduction to Computers course every semester for many years. The last course I taught in this area was a programming course in C++.

3. Public Health

PUH 290 Public Health Research Methods (every summer since 2000)
PUH 297 Public Health Research Practicum (every summer since 2000)
PUH 291 Seminar in Public Health (Fall and Spring 2001)
PUH 111 Introduction to Public Health (Fall 2011, 2012, 2013, 2014)
PUH 270 Community Health Assessment and Planning (every fall since 2006)
PUH 280 Implementation and Evaluation of Public Health Interventions (every spring since 2011)
HEE 110 Personal Wellness (Spring 2011)
HEE 111 Personal and Community Health (Fall 2010)
PUH 200 Principles of Health Education (every spring since 2008)
PUH 295 Epidemiology (every spring since 2008)
PUH 395 Epidemiology (Fall 2018)
PUH 370 Community Health Assessment and Planning (Fall 2019)
PUH 355 Implementation and Evaluation of Public Health Interventions (Spring 2020)
PUH 490 Public Health Research Methods (Spring 2019, Fall 2019)
PUH 497 Research Practicum in Public Health (Spring 2020)

In 1999 I secured funding from the CDC, part of the funding to prime grantee Dr. Sally Davis at the University of New Mexico, for the National Diabetes Prevention Center. My portion of the funding was used to design and implement a Summer Research Enhancement Program that started in 1980 and has continued to this day. The summer program included PUH 290 Public Health Research Methods and PUH 297 Public Health Research Practicum. I have offered these courses every summer. Then some additional CDC funding to the Navajo Division of Health led to the offering of PUH 291 Seminar in Public Health twice around 2001 using distance education methods with interactive video (PictureTel).

Using funding from the Agency for Toxic Substance and Disease Registry (ATSDR – associated with the CDC) Dr. E. Garrison and I developed several environmental health courses to add to the public health program. Then with the Navajo NARCH funding (2000 – 2004) a series of meetings resulted in plans for a Certificate in Public Health to consist of four courses: PUH 111, PUH 270, PUH 280 and one additional elective. That was when I started offering the PUH 270 course. When Dr. Garrison left the College in 2010, I began offering the PUH 200 and 280 courses that he had been teaching. Because HEE 110 and 111 are also requirements of the public health degree and no one was offering them in 2010 and 2011, I offered those courses myself as well. The remainder of the courses listed above I began teaching when the Bachelor Degree courses were approved in 2017.

Graduate courses

PH 560 Public Health 560 Biostat Method I. University of New Mexico (Spring 2004)

Partial List of Research Funding

NIMHD 5P20MD006872 Sanderson (PI) 8/28/12 -2/28/18
Center for American Indian Resilience

Exploratory Center of Excellence (P20) to advance resilience research, education and application to reduce health disparities, including enhancing summer internship programs at Diné College.

Role: Principal Investigator for Diné College subcontract from Northern Arizona University

NIMHD 2P60MD000507 Manson (PI) 8/23/12 -12/31/17
Center for American Indian and Alaska Native Health

Center of Excellence(60) to implement research capacity-building specific to improving the health and well-being of AI/AN people, including mentoring and training programs for undergraduates at Diné College.

Role: Principal Investigator for Diné College subcontract from University of Colorado Health Sciences

SAMHSA MCI-CBO H79SP020635 Donald Chee (PI) 09/30/14 – 09/29/2017
Integrated HIV/AIDS & Substance Abuse Prevention for the Navajo Nation

The project joins forces with the Navajo AIDS Network to provide culturally-appropriate substance abuse and HIV and HCV prevention services, increase SA and HIV awareness on the campuses of TCUs and their surrounding communities, and increase HIV testing among AI/AN populations.

Role: Co-PI

USDA NIFA 2015-38424-22671 Mark C Bauer (PI) 12/01/2014 – 11/30/2017
An Intervention to Promote Navajo Gardening, Nutrition, and Community Wellness.

Project aims to increase access to vegetables in Navajo communities through an intervention designed to promote gardening activities.

Role: PI

NSF TCUP 1H79SPO20635. Donald Robinson (PI) 09/15/2015 – 08/31/2020
STEM 2020 for Diné College

To design, implement, and assess new academic programs and services in STEM-related fields through place and inquiry-based approaches.

Role: Co-PI

AIHEC NARCH Project Carrie Billy (PI) 3/1/2014 – 12/31/2-16
TCU Behavioral Health Research Network: Community-Based Behavioral health Research and Education at Diné College

Project to engage student researchers, public health and behavioral health faculty in developing a research project to determine the health risk and protective factors for the tribal college student body and develop outreach projects to address them.

Role: Project Lead at Diné College

USDA/NIFA 2011-38424-30757 Bauer (PI) 11/01/2011 – 2/28/2014
Navajo Gardening, Nutrition and Community Wellness

This community-based participatory research project gathered community assessment data to plan interventions to promote wellness through gardening and nutrition in the Navajo Nation

Role: PI

NIH/NCI 1R21CA152433 Patten (PI) 11/29/2010 – 8/31/2014

Family Cancer Literacy to Promote Mammography Screening Among Navajo Women
Research project (R21) to determine efficacy of a family literacy approach to increasing screening rates among Navajo women.

Role: Principal Investigator for Diné College subcontract from Mayo Clinic

NIGMS S06GM123550 Bauer (PI) 9/15/17 – 7/31/21

Navajo NARCH Partnership

Native American Research Center for Health to establish a multi-institutional education pathway and conduct culturally relevant, evidence-based research to build healthy communities to yield Navajo health professionals and researchers to support the Navajo Nation's right to exercise its sovereignty, role and responsibilities to achieve health equity.

Role: Principal Investigator

NIH/NCI \$123,172 (Lombard) 10/01/2018 – 7/31/2021 0.6 Cal Mths
Engaging Navajo Elementary Schools in a Randomize Controlled Trial of Yéego Gardening in Schools

This project would focus on school-based gardens, complementary gardening and nutrition curriculum that incorporates Diné language and philosophy and contributes to meeting science standards in elementary schools in the Navajo Nation.

Role: PD for Diné College activities, subcontract from New Mexico State University

NIH/NIGMS 5R25GM61396 \$382,162 Bauer (PI) 9/01/08 – 8/31/10

Research Enhancement at Diné College

Project to provide research internships for students and faculty, additional lab equipment and supplies to improve teaching, and laboratory renovation.

Role: PI

NIH/NCI 5P2CA119013 \$207,034 Garrison (PI) 1/01/09 – 12/31/10

Diné College/Mayo Clinic: Developing Cancer Researchers

Project to support development of collaborative activities to enhance cancer research at the tribal college.

Role: Co-PI

NSF/HRD-0631339 \$2,500,000 Carroll (PI) 02/01/07 – 01/31/12

NSF Pathway Program

Tribal College and University Program to support STEM initiatives.

Role: Co-PI

NIH/NCI 1 R21 CA152433 \$275,000 Patten (PI) 08/23/10 – 08/22/12

Family Cancer Literacy to Promote Mammography Screening among Navajo Women

This study was a clinical trial of an intervention using Navajo language materials to promote breast cancer screening in women who had not been in compliance with recommendations.

Role: Co-PI and Site Supervisor for all project activities on Navajo Nation.

DHHS/Office of HIV/AIDS Policy \$100,000 Bauer (PI) 12/01/10 – 9/30/13

Diné College HIV Prevention Demonstration Pproject for the Navajo Nation

The major goals of this project were to provide HIV/AIDS education, testing and prevention services.

Role: PI

1988 – 1990 – Self-Study Coordinator for Diné College (then Navajo Community College) in preparation for the accreditation visit by North Central Association, convening several

committees to address and report on the key criterion for accreditation. The report and accompanying visit resulted in the re-accreditation of the College.

1991-1994 – Science Consultant Program, created by a grant from the National Science foundation, in collaboration with Lawrence Livermore National Lab, provided the support needed to engage a number of local industries and business (NAPI, Navajo Mine, APS Power Plant, Navajo Tribal Utility Authority, etc.) to adopt Navajo elementary schools classrooms to provide monthly science activities and lessons and encourage science fair projects.

1990 -- A series of projects were started to address the issues of HIV prevention and screening in the Navajo population served by the Shiprock Campus, starting with funding from the state of New Mexico, then from funds from CDC and SAMHSA. Safe sex and other educational programming was provided, as well as condom distribution and eventually free and anonymous testing. These projects lasted until 2018.

2002 - present The Navajo Division of Health designated me a member of the Steering Committee for the Navajo Behavior Risk Factor Surveillance Survey, a project of the new Navajo Epidemiology Center, which eventually became the Community Health Survey and was completed in all five Agencies of the Navajo Nation. The regular reports provide important information about the health status of the Navajo population for all health programs to use in their planning and evaluation activities.

2005 – 2018 Named by successive Presidents of the Navajo Nation to be a member of the Navajo Nation Human Research Review Board, the body that reviews all human research conducted on the Navajo Nation, approving and monitoring projects as appropriate. The position also included reviewing all publications from research, coordinating with other university review boards and recommending modifications to the Navajo Research Act under the oversight of the Health, Education and Human Resources committee of the Navajo Nation Council. This Board meets monthly throughout the year, with an agenda of 30 – 40 items, all of which require reading prior to the meeting, discussion, decisions and votes to be recorded in minutes. These meetings last at least 6 hours, and many times more than that. In between meetings there are publications by researchers sent to the members to read, comment upon, and vote regarding approval. There are also occasional daylong work sessions.

Distance Education was an additional area in which I provided initial funding, ideas, and support to the College. A grant that I secured purchased the first interactive television station, in Shiprock, which was quickly matched by one at the Tsaile Campus. I piloted the first uses of this equipment for course instruction in the area of public health. The system has grown over the years to serve all six campuses, and the public health program continues to be regularly offered across Navajo Nation. I was a member of the Distance Education Committee for several years in the early 2000's.

2004 to present CHR/ MOU and Educational Activities. I have been intensively involved in designing programs to provide training and education to the Community Health Representatives (CHRs) of the Navajo Nation. An MOU was signed by two successive Navajo Nation Presidents and Diné College presidents to formalize an agreement in which the CHR program covers the tuition, textbooks and transportation for their employees to take the public health courses from Diné College required for certificates and additional educational programming. In 2018 a proposal was funded from the Health Resources Service Administration (HRSA). This funding is a subcontract from the COPE organization

(associated with Partners in Health and Harvard University) to develop and implement a curriculum to provide certification to Community Health Workers (CHWs) in the Navajo Nation comparable to that being required now by NM and AZ.

2015-Present Member, Dine College Grants Committee

Starting around 2008 a Grants Committee was established by the Institutional Grants Office and we began meeting weekly to develop the Grants Policies for the College. These policies were approved initially by the Board of Regents in 2010, with major additions/revisions submitted and approved by the Board in 2016. Since then, in addition to participating in online polls of the committee for various decisions, I work with IGO Director and staff to set up processes to generate subawards, subrecipient forms, train staff to assist PIs using grants.gov and other proposal management software. I have served as the only AOR for the College on Grants.gov, NSF Fastlane, and eRA Commons (NIH), and have been the sole person to submit proposals for the College for many years now, and assist in development of grant procedures. This past month we finally set up the Compliance Officer to have AOR capability so that we finally have a backup if I am not available.

2015-Present Member, Institutional Review Board, Dine College, Shiprock, NM

I have been a member of the College's IRB since Fall of 2017, when I worked closely with Sara Kien and the IGO to develop the structure, policies and procedures for the IRB, which were then approved by the Board of Regents, and then participated as a member ever since, reviewing, making recommendations, and approving student and faculty research activities, as well as those of outsider researchers working within the college.

2018 – present I have been named to a Working Group on Genetic Research and Data Sharing Policies for the Navajo Nation. I participated several meetings and in weekly conference calls with representatives of NNDOH, the OPVP, and HEHSC and Navajo IRB regarding issues of genetics research and data sharing for eventual policy changes at the tribal level.

I am leading a group here at the College with colleagues at NAU on a contract for \$30,000 from the Arizona State Health Department to conduct a needs assessment for the entire Navajo Nation on Maternal/Child health status to provide data and prioritization of issues for the Navajo Dept. of Health as well as for the state of Arizona.

2018 – 2020 Yéego School Gardening

This is a continuation of a collaboration with the NMSU Agricultural Sciences Center promoting gardening in communities, households, and now schools. The funding is from the National Cancer Institute (of the NIH), to New Mexico State University, the Fred Hutch Cancer Center at the University of Washington, and to Diné College. This fall 6 schools were chosen to participate and all 3rd/4th grade students and their parents were approached to consent and do baseline assessments in nutrition and gardening. Our team completed 50 – 70% of students in each classroom, which was the target. Now the intervention team, that includes the College's Land Grant Office, is providing the school gardens and the instruction in the classrooms, and our assessment team will do the follow-up surveys in May, 2020.

Curriculum Vitae

Christopher J. Dickerson, Ph.D.

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606.813.5742 – Cell

Electronic Contact

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www.facebook.com/DickersonAcademicConsulting

Education

Ph.D. 2013; Health Services Research, Policy & Administration: University of Minnesota – Twin Cities, Health Policy & Management, Minneapolis, MN.

Dissertation: *“Entry into Nursing and Academic Nursing: Career Trajectories of Nursing Faculty Members.”*

Emphasis: Healthcare Research Design & Methodology

Advisor: James W. Begun, PhD

M.S., 2011; Health Services Research, Policy & Administration: University of Minnesota – Twin Cities, Health Policy & Management, Minneapolis, MN.

Advisor: James W. Begun, PhD

M.S., 2003; Biology: Eastern Kentucky University, Biological Sciences, Richmond, Ky.

Thesis: *“Using an Enzyme-linked Immunosorbent Assay to Quantify Escherichia coli O157:H7 Incorporated into Naturally Occurring Biofilms Isolated from Spinach.”*

Emphasis: Microbiology & Human Health

Advisor: Marcia M. Pierce, PhD

B.A., 2000; Political Science: Eastern Kentucky University, Richmond, Ky.

Summa Cum Laude

Current Positions

Faculty of Public Health, Diné College, Tsaile, AZ

Teaching Epidemiology, Health Services & Policy, and Medical Terminology

Research Consultant, & Editor, Dickerson Academic Consulting

Qualitative and Quantitative Research Design, Dissertation Writing

Teaching Interests

Interprofessional Engagement & Education in Healthcare
Research Design, Method Selection, & Scientific Thinking
Health, Policy, & Politics
Microbiology & Public Health

Research Interests

Supply & Demand of Healthcare Providers
Nursing Education & Nursing Education Policy
Rural Health
Primary Care Access
Politics & Health
Social Disparities & Disease
Geographic Impact on Health

Teaching Experience

August 2019 – Present

Faculty of Public Health, Diné College, Tsaile, AZ
Instructor for undergraduate courses in Epidemiology, Health Services & Policy, and Medical Terminology. Simulcast courses from the Shiprock Campus to the other college sites via ITV or provide asynchronous instruction online. Supporting consultant for Maternal-Child Health Needs Assessment providing guidance on collection and interpretation of secondary data obtained from U.S. Census and Centers for Disease Control and Protection sources.

October 2015 – Present

Research Consultant, Editor, & QI Analyst, Dickerson Academic Consulting, Hima, Ky
Independent consultant, reviewing/editing and providing guidance in project writing, research methodology, and presentation across a wide variety of individual topics including public health, psychology, food-safety science, and nursing at both the master's and doctoral levels; providing guidance in a capacity like an outside professor on a dissertation committee. Also engage in analysis of data collected for quality improvement projects in healthcare.

August 2019 – May 2020

Director, Higher Ground School, Waterflow, NM
Oversaw and lead a Christian primary & secondary education center. Responsible for all aspects of the curriculum and educational experience and directly instructing students at the secondary level. Worked with parents and other teacher to overcome the challenges presented by the onset of the COVID-19 pandemic.

August 2018 – April 2019

Visiting Instructor of Public Health, Fort Lewis College, Durango, CO

Provided undergraduate instruction for the Public Health Program in courses such as Principles of Public Health, principles of Epidemiology, Research Methods & Design, Global Health and health policy, and a survey of human pathophysiology through Health & Disease. Actively engaged in discussions concerning course material in class and potential improvements for the program. Also oversaw the Senior Seminar monitoring student internships and undergraduate theses in Public Health.

May 2018 – July 2018

Online Facilitator: Master of Healthcare Administration Program, Ohio University, Athens, OH

Facilitator of one section of Research and Quantitative Methods for Health Services; a course intended to teach future healthcare administrators to be critical users of the scientific health literature; how to judge scientific research and design for best application to healthcare issues.

August 2012 – July 2015

Instructor, Lincoln Memorial University, Harrogate, TN.

Provided instruction in Research Design & Analysis for the Master of Science program which has emphases in Biomedical Professions and Anatomical Sciences. Additionally, developed and taught a graduate course examining the United States' Healthcare System overall as a way of introducing potential medical students to the working environment of healthcare.

Other duties included instruction in Microbiology, particularly Clinical, for the Nursing & Pre-Nursing students, but also General for the Biology program as well as Introductory Biology. Assigned to both the main campus and the Corbin, Ky, extended site, I was responsible for all aspects of the courses, including lab maintenance and preparation.

March 2008 – May 2010

Teaching Assistant: Health Policy & Management, University of Minnesota – Twin Cities, Minneapolis, MN.

Project reviewer for students in the Master of Science (Health Services Research, Policy & Administration) and Master of Public Health (Public Health Administration & Practice) programs commenting on research design and writing.

October 2007 – March 2010

Instructor of Biology: Herzing University, Crystal, MN.

Provided instruction in the areas of Microbiology, Nutrition, and Anatomy & Physiology for Dental Hygiene students; including establishing a microbiology labs.

September 2009 – December 2009

Teaching Assistant: Political Science, University of Minnesota, Minneapolis, MN.
Aided in presenting an undergraduate course on care in political thought; provided background and observations on the US healthcare system and the healthcare reform debate.

August 2003 – May 2006

Instructor of Biology & Microbiology: Lincoln Memorial University, Harrogate, TN.
Provided instruction in Microbiology and Anatomy & Physiology to Nursing & Pre-Nursing students at the Corbin, Ky; responsible for all aspects of the courses, including lab maintenance and preparation.

August 2005 - December 2005

Instructor of Microbiology: Eastern Kentucky University, Richmond, Ky.
Taught Clinical Microbiology as part of the Pre-Nursing curriculum at the Corbin, Ky, extended site where I was responsible for both the lab and lecture portions of the course.

February 2005 - March 2005

Temporary Instructor of Political Science: Somerset Community College, Somerset, Ky.
Provided instruction in American Government while the professor of record was on leave.

June 2001 – May 2003

Teaching Assistant: Biological Sciences, Eastern Kentucky University, Richmond, Ky
Taught Clinical Microbiology laboratory sections, preparing nursing students for employment in their career of choice. Assisted as necessary in the lecture portion of the course.

July 2001 & April 2002

Guest Lecturer: Psychology, Eastern Kentucky University, Richmond, Ky
Discussed my experiences as a volunteer chaplain and the impact of the hospital environment on health outcomes in a course on Health Psychology.

Related Experience

October 2017 – August 2018

Partner: Healthy Clay Coalition, Manchester, Ky
Engage with local community leaders and agencies to improve health in Clay County, Kentucky. Created initial public map of health & safety resources across the county; including first responders, exercise opportunities, fresh produce suppliers, and healthcare providers. Lead author, in conjunction with the Pedestrian & Cycling Safety Subcommittee, of the “Manchester-Clay County, KY, Pedestrian & Cycling Master Plan” to improve walkways for both exercise and personal transport; the first step in a possible county-wide transportation plan.

October 2014 – May 2015

Undergraduate Research Mentor, School of Mathematics & Sciences, Lincoln Memorial University, Harrogate, TN

Mentor and oversee the development, design, and execution of undergraduate research projects related to microbiology.

June 2010 – July 2012

Research Assistant: Health Policy & Management, University of Minnesota – Twin Cities, Minneapolis, MN

Examined geographic and socioeconomic factors related to childhood asthma; including merging of large and diverse demographic, geographic, and health datasets into a single geocoded data source. Aided in developing a new method for reallocating block time in the operating room suite.

September 2008 – August 2009

Research Assistant: Rural Health Research Center, Health Policy & Management, University of Minnesota – Twin Cities, Minneapolis, MN

Conducted research on state level programs and their involvement of rural providers. Examined the potential policy implications of a proposed Medicare change on rural providers and residents.

January 2001 – May 2001

Graduate Assistant: Academic Testing, Eastern Kentucky University, Richmond, Ky
Served as a graduate assistant scoring tests and performing other office functions.

June 1999 – December 2000

Undergraduate Research Assistant: Biological Sciences, Eastern Kentucky University, Richmond, Ky

Served as an undergraduate assistant in a study comparing viral detection techniques.

Other Experience

March 1999 – July 2003

Water Safety Instructor: Community & Workforce Education, Eastern Kentucky University, Richmond, Ky

Taught swimming to a wide age range of individuals.

August 2000 – December 2000

Peer Tutor: Student Success Institute, Eastern Kentucky University, Richmond, Ky
Assisted fellow college students in understanding topics such as math, computer science, physiology, and microbiology.

September 1999 – December 1999

Assistant to the Director: Kentucky Mountain Housing Development Corporation,
Manchester, Ky
Assisted in database development and performed other office related tasks on an as needed basis in a cooperative education position.

Publications & Presentations

Waters, A., McCue, K., Tallis, K., Tutt, M., Bauer, M., Teufel-Shone, N., and **Dickerson, C.** (2020). *Navajo Nation Maternal and Child Needs Assessment: A Community Process*. Presentation, 2020 Annual Meeting of the American Public Health Association, Virtual.

Navajo Native American Research Centers for Health (NARCH) Partnership between Diné College and Northern Arizona University, Navajo Nation Department of Health, and Arizona Department of Health (**Dickerson, C.**, Contributor). (2020) *2020 Navajo Nation Maternal and Child Health Needs Assessment*. https://www.nec.navajo-nnsn.gov/Portals/0/Home%20Webpage/MaternalChildHealth_V7_HiRez_Sept_30_20.pdf

Healthy Clay Coalition Pedestrian & Cycling Safety Subcommittee (**Dickerson, C.**, Lead Author). (2018). *Manchester-Clay County, Kentucky, Pedestrian & Cycling Master Plan*. Cumberland Valley District Health Department. <https://app.box.com/s/okxs4ydz3wp5rk7m4voed35b3ug4zx>

Gregg, W., Jennings, N., and **Dickerson, C.** (2010). *State Flex Program EMS/Trauma Activities and Integration of Critical Access Hospitals in Trauma Systems*. Flex Monitoring Team Policy Brief #27.

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Service

Board Chair	
Higher Ground Christian School, Waterflow, NM	2020 – Present
Judge	2014 – 2015
Clinch-Powell Educational Cooperative Science Fair	
Judge	2011 – 2012
Minnesota History Day	
Judge	2011 – 2012
Twin Cities Regional Science Fair	
Vice-President & Treasurer	2007 – 2010
University of Minnesota Student Chapter – Academy Health	
Volunteer Chaplain	1998 – 2004
Memorial Hospital, Manchester, Ky	
Board Member	1996 – 2000
Appalachian Community Services, Manchester, Ky	
Co-President	1999 – 2000
Golden Key International Honour Society, Eastern Kentucky University	
Vice-President	1996 – 1998
Clay County InterAgency Council, Manchester, Ky	
Staff Volunteer	1990 – 1996
Adventist Community Services, Manchester, Ky	

Honors, Awards and Fellowships

Phi Sigma (Biology) Honor Society, Eastern Kentucky University
 Phi Kappa Phi Honor Society, Eastern Kentucky University
 Pi Sigma Alpha (Political Science) Honor Society, Eastern Kentucky University
 Who's Who of American College Students - 2000, Eastern Kentucky University
 Arthur Y. Lloyd Award, Department of Government, Eastern Kentucky University
 Golden Key International Honour Society, Eastern Kentucky University
 Dean's Award, Eastern Kentucky University
 Regents Scholarship, Eastern Kentucky University

Appendix E: REACH Grant

Project Title: REACH for Healthy Navajo Communities

SUBAWARD AGREEMENT

Prime Recipient	Sub-Recipient
Name: Partners In Health	Name: Diné College
Address: 800 Boylston Street, Suite 300, Boston, MA 02199	Address: P.O. Box #Co7, Tsaile, AZ 86556
Subaward Number: AVA0319.DC.09302018	DUNS Number: 946701646
Prime Grant Number: NU58DP006594-01-00	PIH Fund Number: AVA0319
Prime Sponsor: Centers for Disease Control and Prevention	Year 1 Period of Subaward Agreement: 9/30/2018 – 9/30/2019
Total Period of Prime Award: 9/30/2018 – 9/29/2023	Year 1 Subrecipient Budget: USD\$37,513
Year 1 Period of Prime Award: 9/30/2018 – 9/30/2019	Year 1 Budget of Prime Award: \$792,000

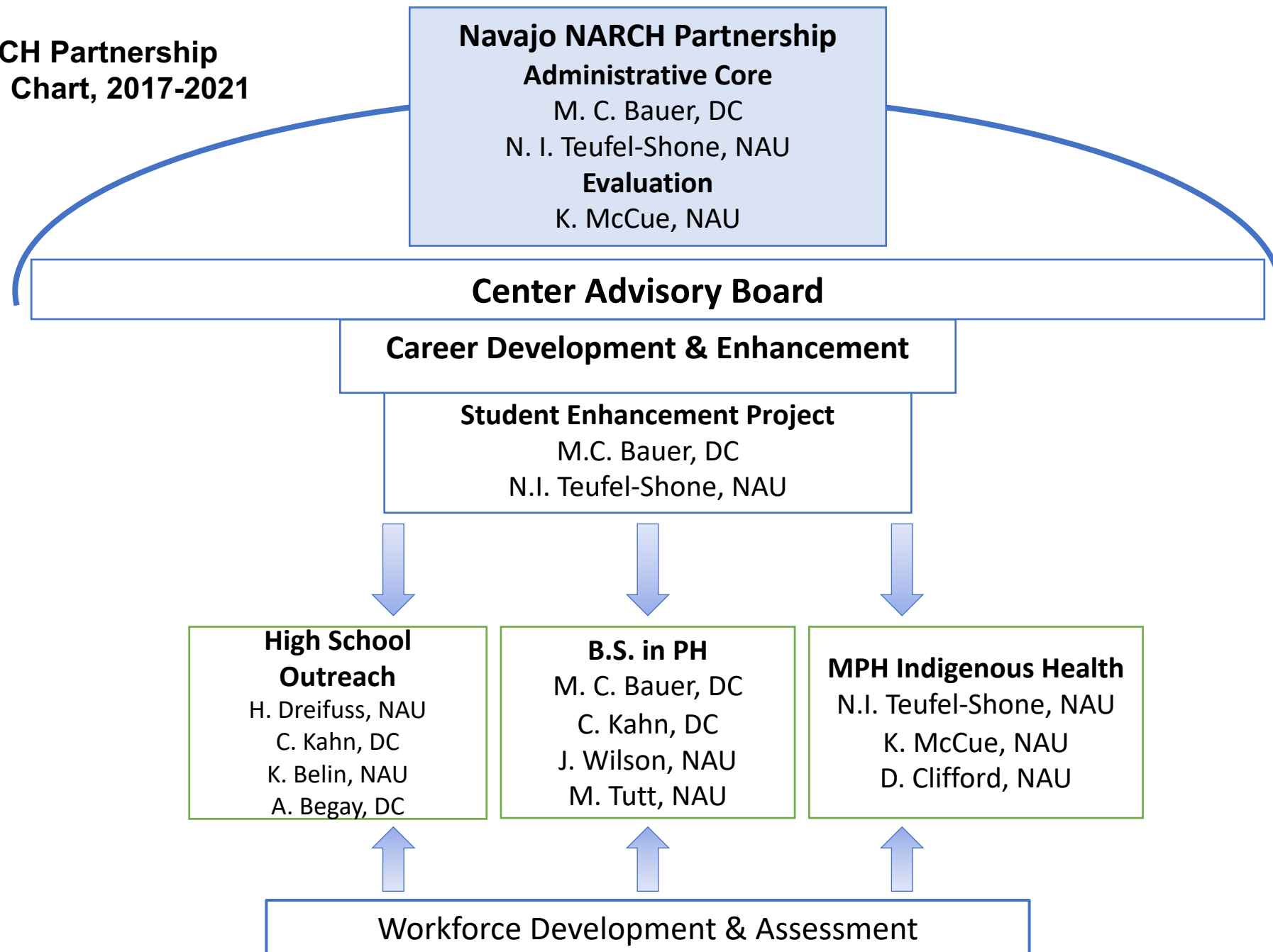
STATEMENT OF WORK

Diné College will begin the process of creating a Navajo Nation Community Health Representative certification with the advisement of staff at the Indian Health Service, the Navajo Department of Health, COPE, the New Mexico Department of Health, the Arizona Department of Health, as well as input from Tribal and community representatives. The goals of the proposed Community Health Representative certification development component of the REACH grant are to:

- 1) Carry out a needs assessment for Navajo CHW roles and scope, analyze outcomes, and provide a needs assessment report;
- 2) Define the core competencies for CHW certification that meet the professional requirements of Community Health Worker standards as well as specific cultural and community requirements as revealed in the needs assessment;
- 3) Draft a CHW certification curriculum with advisement from the New Mexico Department of Health, the Arizona Department of Health, COPE, and the Navajo Nation Department of Health.

Appendix F: Navajo NARCH Partnership Organizational Chart, 2017-2021

**Navajo NARCH Partnership
Organizational Chart, 2017-2021**



Appendix G: Indigenous Public Health Pathway - Course Flow Chart

FALL 2019

HEE 111 Personal and Community Health (3)

AND

PUH 111 Introduction to Public Health (3)

Spring 2020

****BIO/PUH 170 Medical Terminology (3)**

Prerequisite: Reading proficiency requirement or concurrent enrollment in ENG 075.

AND

***ENG 101 Freshman English I (3)**

Prerequisite: ENG 075, 085 or placement scores of NRR and test into ENG 101.

OR

***ENG 075 Advanced Reading (3)**

Prerequisite: ENG 072 or placement test.

OR

***ENG 085 Communication Workshop II (3)**

Prerequisite: ENG 082 or placement test.



*In addition to BIO/PUH170 you will take one of three courses; this course will vary depending on your placement scores.

FALL 2020

****PUH 275 Health Services and Policy (3)**

Prerequisite: Completion of ENG 075, PUH 111 or another science class.

AND

HEE 110 Introduction to Wellness (3)

OR

****PUH 141 Nutrition for Health (3)**

Prerequisite: Reading proficiency requirement or concurrent enrollment in ENG 085.



Spring 2021

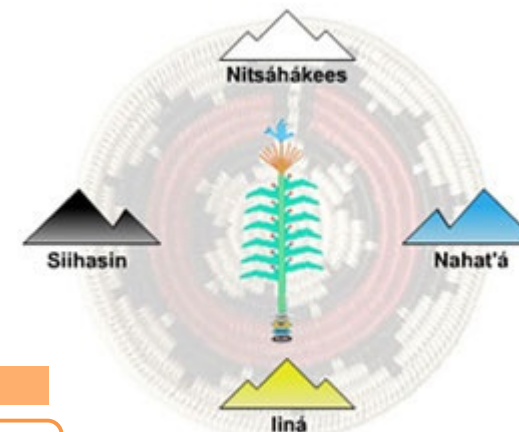
****PUH 201 Principles of Environmental Public Health (3)**

Prerequisite: Completion of ENG 075, PUH 111 or ENV 101 or another science class.

AND

****PUH 200 Principles of Health Education (3)**

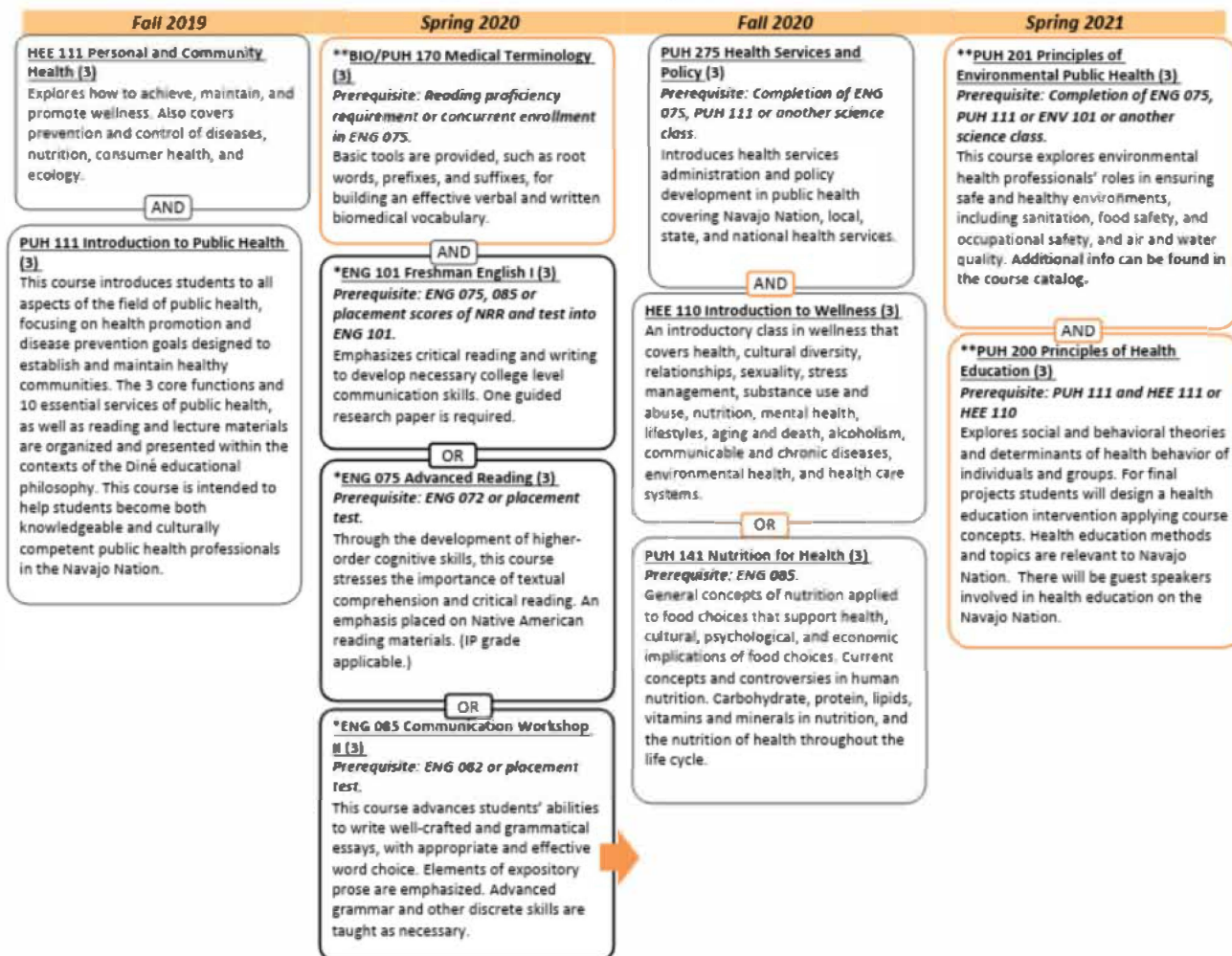
Prerequisite: PUH 111 and HEE 111 or HEE 110



Appendix H: ISEP Dual Credit Pathways to Health Professions Brochure

DUAL CREDIT Pathways to Health Professions

Indigenous Public Health Pathway - Course Flow Chart



Indigenous Summer Enhancement Project ISEP DUAL CREDIT Pathways to Health Professions



High School Outreach
Navajo Native American
Research Center for Health
Student Enhancement Project
in Public Health

The High School Outreach Student Enhancement Project of the Navajo Native American Research Center for Health aims to increase the number of high school students familiar with health related professions. As an umbrella we focus our efforts through programs such as the Indigenous Summer Enhancement Project (ISEP), dual credit programming with Dine College and service learning in local communities. Each collaboration can be unique as we plan educational opportunities with each participating High School during the academic year, and working towards a semester long research assistantship with a Navajo specific health research projects.

IN PARTNERSHIP WITH

NORTHERN
ARIZONA
UNIVERSITY



ISEP *Indigenous Summer Enhancement Project*

Preparing Native American students for careers in Public Health and Health Research

While participating in ISEP, the students receive:

- * \$150.00 Stipend
- * Mentorship
- * Room and board provided without charge

Location:

Dine College - Tsaile Campus

Navajo NARCH - has developed a unique summer program for Native American students interested in public health research and has provided the program since summer 2018. The vision of ISEP at Diné College is to introduce Native American students to careers in public health and health research and to strengthen research capabilities of Tribal Colleges and Universities.

The program is available to high school students, grade 9-12. ISEP provides a culturally supportive atmosphere for developing a strong, multicultural approach in public health and health research. The one week program will help students to develop skills and interests in public health and health research with guidance from graduate and undergraduate mentors.



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Contact:

Linda V. Garcia, AS, BA
lv Garcia@dinecollege.edu

Dine College
P.O.Box 580
Shiprock, NM 87420

Phone: 505-368-3592
Fax: 505-368-3591

Appendix I: MOU Between Dine College and CHR/Outreach Program NNDOH

MEMORANDUM OF UNDERSTANDING

between

DINÉ COLLEGE

and

COMMUNITY HEALTH REPRESENTATIVE (CHR) / OUTREACH PROGRAM NAVAJO NATION DEPARTMENT OF HEALTH

The Navajo Nation CHR/Outreach Program (the "Program") prioritizes professionally trained and certified Community Health Workers (CHWs), and seeks to enhance said employees' skills and knowledge in public health through university- and college-level coursework. Academically trained CHWs will in turn a) improve the delivery and quality of services to the Navajo people, b) enable the Program to meet the goals and objectives of its funding agencies, and c) increase job satisfaction among its workforce.

The Navajo Nation CHR/Outreach Program supports Dine' College's Bachelor of Science in Public Health program, which is based on the core competencies and disciplines of the public health profession. In addition, the Program supports Dine' College's efforts to apply to its Public Health coursework the Dine Philosophy of Education, creating a culturally accurate and appropriate teaching methodology and curriculum that meets the specific needs of CHWs serving predominantly a Navajo population. Lastly, Dine' College employs a public health faculty who have practiced professionally on the Navajo Nation, and have demonstrated through research and instruction, a commitment to Navajo students in the field of public health.

The Navajo Nation CHR/Outreach Program, by and through this Memorandum of Understanding, intends to continue its partnership with Dine' College to educate and train CHWs seeking a degree in its public health program.

The Program will provide limited 'release time' to employees accepted and enrolled in Dine' College's Public Health program. Furthermore, the Program will encourage its employees to enroll in classes on their own time expediting completion of a degree.

The higher education goal of the Program is to 1) support all employees seeking a degree in public health; 2) ensure that all enrolled employees in the public health program

graduate with a degree; and 3) achieve a higher education degree in public health for a majority of its workforce in the next 10 years.

To further these goals, the Parties to this Memorandum of Understanding hereby set forth the following agreements:

I. The Navajo Nation CHR/Outreach Program will continue to provide administrative directives to its employees, encouraging them to complete a degree in Public Health at Diné College.

II. The Navajo Nation CHR/Outreach Program will provide "release time" for enrolled employees to attend at least one Public Health or Health Education course scheduled during working hours each semester, provided that necessary funding levels, employee workload and coverage, and other considerations are satisfactorily addressed by the Program.

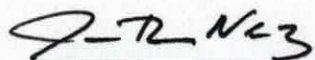
III. Navajo Nation CHR/Outreach Program will encourage employees to enroll in additional courses required by the Public Health program, on their own time to expedite completion of their degree.

IV. Diné College will provide at least one Public Health and/or Health Education course during each semester, held during normal working hours (i.e., 8:00 a.m. to 5:00 p.m.), enabling CHWs to take advantage of "release time" as offered by the Program.

V. Diné College will support and enhance its interactive television distance education system enabling CHWs to participate in the Public Health program at select sites around the Navajo Nation.

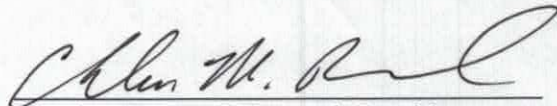
VI. Employees who fail to obtain a grade to satisfy Navajo Nation CHR/Outreach Program requirements in a class will be responsible for costs to retake the class.

For the Navajo Nation:



Jonathan Nez, President

For Diné College:



Charles "Monty" Roessel, President

Appendix J: Certificate in Public Health_Dine College and University of Arizona

CERTIFICATE IN PUBLIC HEALTH

Awarded by



MEL AND ENID
ZUCKERMAN COLLEGE
OF PUBLIC HEALTH

_____[Name]____

Successfully completed a 12-credit academic program in Public Health
developed in partnership between
Diné College and the University of Arizona

Awarded on May __, 20__
Tsaile, Arizona Navajo Nation

Charles M. Roessel, PhD
President, Diné College

Iman A. Hakim, MD, PhD, MPH
Dean, Mel and Enid Zuckerman College of Public Health
The University of Arizona