

# MASTER OF PUBLIC HEALTH DEGREE PROGRAM

## KBOR Program Review Report

KSU COLLEGE OF VETERINARY MEDICINE

September 26, 2011

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# **MASTER OF PUBLIC HEALTH DEGREE PROGRAM**

## **KBOR Detailed Program Review Report**

### **I. Introduction**

#### **A. College, Department and Date**

College: College of Veterinary Medicine (academic home). Colleges participating in the interdisciplinary program include: Agriculture, Arts and Sciences, Human Ecology, and Veterinary Medicine.

Program: Master of Public Health (interdisciplinary)

Date: 2011 KBOR Graduate Program Review

#### **B. Person(s) Responsible for Preparing Report**

Program Director: Dr. Michael Cates  
Program Assistant: Ms. Barta Stevenson

#### **C. Description of the Department**

The Master of Public Health Program (MPH) is an interdisciplinary program which includes four academic colleges, eight departments, one academic division, one institute, and three support units on campus including:

- College of Agriculture
  - Department of Animal Sciences & Industry
  - Food Science Institute
- College of Arts and Sciences
  - Division of Biology
  - Department of Kinesiology
  - Department of Statistics
- College of Human Ecology
  - Department of Human Nutrition
  - Department of Hospitality Management and Dietetics
- College of Veterinary Medicine
  - Department of Anatomy and Physiology
  - Department of Clinical Sciences
  - Department of Diagnostic Medicine and Pathobiology
- Support Units
  - Division of Public Safety
  - Information Technology Assistance Center
  - Veterinary Diagnostic Laboratory

The Master of Public Health Program, like all interdisciplinary graduate programs at Kansas State University, is administratively located within the Graduate School. As with each interdisciplinary

program, it has a graduate program director that is responsible for the management of the interdisciplinary program. Also, like other interdisciplinary programs, the MPH Program has a “home” in one of its supporting academic colleges—in this case, the College of Veterinary Medicine—from where daily operational support is provided. The current program director’s faculty appointment is in the College of Veterinary Medicine; so, he reports directly to the Dean of Veterinary Medicine.

#### **D. Brief History of Department**

The Master of Public Health Program was approved by the Kansas Board of Regents in January 2003 and enrolled its first student in the Fall Semester of 2003. Originally the program was funded from a reallocation of resources at Kansas State University with a faculty member from the Department of Human Nutrition serving as the part-time director. In 2008, the academic home of the program was transitioned from the College of Human Ecology to the College of Veterinary Medicine with a full-time director and part-time program assistant being hired.

Since its inception in 2003, the program has had a total of 191 students accepted into the program with 158 enrolling and as of August 2011, has had 50 graduates with the Master of Public Health Degree. The last two years has seen extraordinary growth and, currently (as of Fall 2011), there are 94 students working on the degree program. Currently the program is seeking professional accreditation through the Council on Education for Public Health (CEPH).

#### **E. A listing of all degrees offered by the Department by CIP Code**

Master of Public Health Degree – CIP Code: 512201

## **II. Departmental Purpose**

### **A. Brief Mission Statement**

The mission of the Kansas State University Master of Public Health Program is to provide education, research, and service across multiple disciplines of public health, impacting human, animal, and community health locally, regionally, and globally.

### **B. Statement of the Centrality of Program to College, University and State**

The public health infrastructure in the United States and Kansas is dependent on people and requires a workforce that can meet the continuing and emerging challenges of the 21<sup>st</sup> century. Many of the public health issues of our nation are mirrored in the population of Kansas, with the state ranking very low in many aspects of public health. The key components of public health are (1) a community basis and (2) a focus on prevention; this program's core elements and its areas of emphasis target current population health issues with leading edge education, research, service, and extension efforts. In the recent Kansas State University Performance Agreement with the Board of Regents, the university stated Key Performance Indicator 2 for Institutional Goal 2 is to increase the number of students graduating in the Master of Public Health Program.

### **C. Statement of the Uniqueness of the Academic Degree to the College, University, Regents System, State, Region and Nation**

K-State's MPH degree has four emphasis areas that are aligned with the strengths of the University: (1) food safety and biosecurity; (2) infectious diseases and zoonoses; (3) public health nutrition; and (4) public health physical activity. Compared to accredited schools and other graduate programs of public health in the United States, this blend of areas of emphasis, for a Master of Public Health degree, is very unique. The tie to this university's land grant mandate, integrating public health related instruction, research, service and extension activities in our multiple college and department partners, provides a strong linkage to individuals, families and communities throughout the state. This program is also very unusual because of its close relationship with one of only 28 colleges of veterinary medicine in the United States; this alignment provides outstanding opportunities and linkages to tremendous expertise in emerging diseases and population-based health solutions.

#### D. Department's Goals for Academic Degrees for Next Seven Years

The table below outlines our graduation goals for the next seven years. This metric was set by the University's Provost in 2009 without input from this program. The target is unrealistic based on the high number of part-time students, in conjunction with the inadequate resourcing provided the program.

Table 2.D.1. Increase the number of MPH graduates by 5% each year (University Provost set a metric period of three years)				
Academic Year	Goal	Number Graduated	Goal Percent Achieved	Met Goal?
2009-2011	30	28	93%	No
2010-2012	33	22	Period not complete	
2011-2013	36	13	Period not complete	
2012-2014	36			
2013-2015	39			
2014-2016	39			
2015-2017	42			
2016-2018	42			

For accreditation, we have set goals related to graduation timeliness—the degree program should be completed within 24 months for full-time students and within 60 months for concurrent DVM/MPH students. It will be difficult, with current course capacity and field experience capacity, to meet the 24-month goal for full-time students. However, we are on target for the concurrent DVM/MPH students.

Table 2.D.2. Goal: At least 80% of full-time MPH students will complete their degree requirements within 24 months of enrollment in the program						
Academic Year Started	Number Started	Number Graduated	Graduation Rate	Graduated within 24 Months	Goal Percent Achieved	Met Goal?
2004	3	3	100%	3	100%	Yes
2005	3	3	100%	2	100%	Yes
2006	1	1	100%	1	100%	Yes
2007	2	2	100%	2	100%	Yes
2008	5	5	100%	5	100%	Yes
2009	5	5	100%	4	80%	Yes
2010	17	6				Not On Target
2011	15	1				N/A

**Table 2.D.3. Goal: At least 80% of concurrent degree students (i.e., DVM/MPH) will complete the degree requirements within 5 years of enrollment**

Academic Year Started	Number Started	Number Graduated	Graduation Rate	Graduated within 60 Months	Goal % Achieved	Met Goal?
2004	9	7	78%	6	67%	No
2005	0	0	n/a	n/a	n/a	n/a
2006	10	8	80%	8	80%	Yes
2007	6	5	83%	5	83%	Yes
2008	7	1				On Target
2009	10	3				On Target
2010	20					On Target
2011	4					On Target

### III. Program Descriptions

#### A. Major Instructions, Scholarship, and Service Responsibilities of Department

All instruction, scholarship, and service responsibilities are part of the supporting departments and colleges. All faculty members are graduate faculty in one or more of the supporting departments.

#### B. Description of the Facilities and Equipment for the Department

Laboratories and equipment for basic and applied research are located in each department that supports an emphasis area. These include:

**The Department of Human Nutrition.** The department has a modern small animal facility that is accredited and meets NIH standards, surgical suites, a DEXA for measuring human body composition, and molecular and applied biology facilities in the laboratories. The department has approximately 20,000 sq. ft. for office, instruction, and research space. Research laboratories and service areas comprise approximately 9,000 sq. ft. and include:

- The Sensory Analysis Center
- A 1500 sq. ft. animal laboratory is accredited by the American Association for Accreditation of Laboratory Animal Care (AAALAC).
- An adjacent 900 sq. ft. room is a nutritional biochemistry laboratory for research, equipped with supplies and instrumentation.
- A Nutritional Status Assessment laboratory.
- Other laboratories are used for chemical and physical analyses of biological and food materials.

**The Department of Kinesiology.** The department has laboratory facilities for basic and applied research in exercise physiology in addition to laboratories in public health physical activity behavior and promotion.

- Youth Health Behavior Research Laboratory.
- Cardiovascular and Thermal Physiology Laboratory.
- The Cardiorespiratory Exercise Laboratory housed in the College of Veterinary Medicine complex.
- Human Exercise Physiology Laboratory
- Physical Activity and Public Health Laboratory
- The Functional Intensity Training Laboratory is located in Natatorium, Room 4. It encompasses the L.I.F.E. Program and K-State CrossFit.

**The Food Science Institute.** The Institute is housed in the Department of Animal Sciences and utilizes the laboratories located in Call and Weber Halls and includes:

- The Meat Science Support Facility located in Weber Hall is a 23,000 square foot, state-of-the-art meat science research and teaching complex.
- Other laboratories include the Meat Lab, an on-the-rail abattoir with three processing laboratories; the Sensory Lab, equipped for objective and subjective product evaluation and



cooking; the Color Lab with its chilled and frozen display cases; the Meat Chemistry Lab, a fully-equipped facility for analytical work; the Meat Microbiology Lab; and the Post-Processing Pasteurization Lab.

- The Food Chemistry and Microbiology Laboratories (BL2), located in Call Hall, include facilities, equipment, and instruments for benchtop food product development, packaging, physical, chemical, and microbiological analyses of foods. Part of the facility is specifically designed for accelerated shelf-life testing of food products, and is equipped with controlled atmosphere incubators.

**The College of Veterinary Medicine.** The College has extensive clinical and research resources, including a veterinary teaching hospital. Research facilities and equipment of relevance to public health includes:

- Flow Cytometry Facility: Located in the Department of Diagnostic Medicine/Pathobiology is directed by Dr. M.J. Wilkerson.
- Confocal Microfluorometry and Microscopy Facility: Located in the Department of Anatomy and Physiology, the Confocal Microfluorometry and Microscopy Facility are directed by Dr. Philine Wangemann.
- Transmission electron microscope, DNA sequencer, confocal microscopy, a BL3 laboratory, laboratory animal facilities an AAVLD accredited diagnostic lab, facilities for serology and histopathology, and a rabies detection and treatment program.

#### **C. Information on Special Information Resources and Services**

The MPH program uses the K-REx repository for student's theses, field experience reports and slides. To date the repository has 33 items; 28 student reports and 5 faculty articles. (See <http://krex.k-state.edu/dspace/handle/2097/1063>)

#### **D. Department's Contribution to General Education**

The MPH Program is not part of the General Education program at Kansas State University.

#### **E. Department's Role in Providing Instruction Services to Students Outside the Department**

As an interdisciplinary program, the Master of Public Health Program uses instruction services from multiple departments in several of the colleges on campus. There are no direct reporting faculty to the MPH program and no separate MPH courses.

#### IV. Self-Evaluation of Faculty and General Programs

The MPH Program Faculty are all graduate faculty members of a department within one of the supporting academic colleges at Kansas State University and provide to within those departments instruction, research, service, and/or extension/outreach activities according to their appointments.

To coordinate interdisciplinary related efforts, the MPH Program has a coordinating committee, comprised of representatives from participating entities on this campus:

The current coordinating committee members are:

Chair: Program Director

Area of Emphasis faculty representatives:

- Food Safety and Biosecurity: Daniel Fung and Deanna Retzlaff
- Infectious Diseases/Zoonoses: Robert Larson and Justin Kastner
- Public Health Nutrition: Sandra Procter and Tandalayo Kidd
- Public Health Physical Activity: Katie Heinrich and Mary McElroy

Other Representatives:

- MPH Students: Eric Kelly
- One Health Kansas: Beth A. Montelone
- Pathways to Public Health: Kimathi Choma

Currently, there are 55 graduate faculty members from the four colleges, eight departments and three support units that have asked to be part of the MPH faculty. In addition to their own departmental duties, which include a variety of administrative, instruction, research, extension, service and/or outreach, they serve as advisors and supervisory committee members for MPH students.

The breadth and depth of public health-related expertise in our faculty are major strengths, compared to some other, more traditional public health graduate programs. At Kansas State University, our students have easy access to a unique blend of faculty members, representing a unique blend of very relevant public health areas of emphasis.

A summary of their unique qualifications is outlined below in Table 4.1.

**Table 4.1. Graduate faculty used to support the MPH Program**

Name	Rank	Current Department	Gender	Race or Ethnicity	Highest Degree Earned	Discipline	Teaching Area
<b>Department/Specialty Area</b>		<b>Food Safety/Biosecurity</b>					
Fung, Daniel	Prof	Dept of Animal Sciences, Food Science Institute	M	Asian	MSPH, PhD	Food Science	Public Health, Food Science
Kastner, Curtis	Prof	Food Science Institute	M	White	PhD	Food Science	Food Science
Marsden, James L	Prof	Dept of Animal Sciences, Food Science Institute	M	White	MS, PhD	Food Science	Food Science
Nutsch, Abbey	Asst Prof	Dept of Animal Sciences, Food Science Institute	F	White	PhD	Food Science	Food Science, Food Safety
Phebus, Randall	Prof	Dept of Animal Sciences, Food Science Institute	M	White	PhD	Food Technology and Science, Food Science and Technology	General Food Science and Food safety
Retzlaff, Deanna	Asst Prof	Food Science Institute	F	White	PhD	Food Safety Microbiology	Food safety and microbiology
Smith, Scott	Prof	Dept of Animal Sciences, Food Science Institute	M	White	PhD	Biochemistry, Food Science	Food Chemistry
Zurek, Ludek	Assoc Prof	Dept of Entomology	M	White	PhD	Microbial Ecology	Entomology
<b>Department/Specialty Area</b>		<b>Infectious Diseases/Zoonoses</b>					
Cates, Michael	Dir and Prof	Dept of Diagnostic Medicine and Pathobiology	M	White	DVM, MPH, Diplomate ACVPM	Public Health	Disease Control
Chapes, Stephen	Prof	Division of Biology	M	Hispanic	PhD	Immunology and Public Health	Biology/ immunology
Chengappa, M.M.	Univ Dist Prof	Dept Head, Diagnostic Medicine and Pathobiology	M	Asian	DVM, PhD	Microbiology	Veterinary Bacteriology and Mycology
Ganta, Roman R.	Prof	Dept of Diagnostic Medicine and Pathobiology	M	Asian	MSc, PhD	Biochemistry	Veterinary Microbiology and Molecular Diagnostics of Infectious Diseases
Hanlon, Cathleen A.	Prof	Director, Rabies Laboratory	F	White	VMD, PhD	Veterinary Medicine; Comparative Medicine	Rabies, Immunology, Virology, Public Health

Kastner, Justin	Asst Prof	Dept of Diagnostic Medicine and Pathobiology	M	White	PhD, MS, PgDip	Food Science, Food Safety	Food Science, Food Safety and Control, Public Health
KuKanich (Stenske), Katherine	Asst Prof	Dept of Clinical Sciences	F	White	DVM, PhD	Microbiology and Public Health	Small animal internal medicine, respiratory disease, infectious disease
Larson, Robert	Prof	Dept of Clinical Sciences	M	White	DVM, PhD	Animal Sciences and Industry	Epidemiology, reproduction, and cattle management
Montelone, Beth	Prof	Assoc Dean, College of Arts and Sciences	F	White	PhD	Biology	Biology/ genetics
Mosier, Derek A.	Prof	Dept of Diagnostic Medicine and Pathobiology	M	White	DVM, MS, PhD,	Physiology, Pathology	Veterinary Pathology
Nagaraja, T.G.	Univ Dist Prof	Dept of Diagnostic Medicine and Pathobiology	M	Asian	MVSc, PhD	Veterinary Medicine, Microbiology	Microbiology, rumen physiology
Narayana, Sanjeev	Asst Prof	Dept of Diagnostic Medicine and Pathobiology	M	Asian	MS, PhD	Veterinary Pathobiology	Veterinary Pathobiology and Pathogenic Microbiology
Nguyen, Annelise	Asst Prof	Dept of Diagnostic Medicine and Pathobiology	F	Asian	PhD	Toxicology	Toxicology
Oberst, Richard D.	Prof	Dept of Diagnostic Medicine and Pathobiology	M	White	DVM, PhD	Pathobiology, virology, immunology	Veterinary Virology
Payne, Patricia A.	Asst Prof	Dept of Diagnostic Medicine and Pathobiology	F	White	DVM, PhD	Parasitology	Parasitology
Powell, Douglas	Assoc Prof	Dept of Diagnostic Medicine and Pathobiology	M	White	PhD	Food Science	Food safety risk analysis; food safety journalism
Renberg, Walter	Assoc Prof	Dept of Clinical Sciences	M	White	DVM	Vet Med	Small Animal Surgery, International Medicine
Renter, David	Assoc Prof	Dept of Diagnostic Medicine and Pathobiology	M	White	DVM, PhD	Epidemiology	Epidemiology
Sanderson, Michael W.	Prof	Dept of Clinical Sciences	M	White	DVM	Veterinary Science - Epidemiology	Epidemiology
Scott, H. Morgan	Prof	Dept of Diagnostic Medicine and Pathobiology	M	White	DVM, PhD	Epidemiology	Advanced epidemiological methods and analysis
Wilkerson, Melinda	Assoc Prof	Dept of Clinical Sciences	F	White	DVM, MS, PhD	Veterinary Pathology, Veterinary Science	Veterinary Immunology, Theory and Apps of Flow Cytometry
Van der Merwe, Deon	Asst Prof	Dept of Diagnostic Medicine and Pathobiology	M	W	PhD	Pharmacology and Toxicology	Environmental Toxicology

Department/Specialty Area		Public Health Nutrition					
Barrett, Betsy	Assoc Prof	Dept of Hospitality Management and Dietetics	F	White	PhD	Adult Education, Institutional Management, Hospitality Management	Hospitality mgmt and dietetics
Canter, Deborah	Prof	Dept of Hospitality Management and Dietetics	F	White	PhD	Food Systems Admin	Dietetics, Hospitality management, management in healthcare
Chambers IV, Edgar	Prof	Dept of Human Nutrition and Dir of Sensory Analysis Lab	M	White	PhD	Foods and Nutrition	Sensory Analysis and Consumer Behavior
Gould Rebecca J.	Dir	Dept of Hospitality Management and Dietetics	F	White	PhD	Food Science, Institutional Administration	Financial management of hospitality operations
Grunewald, Katharine	Prof	Dept of Human Nutrition	F	White	PhD; Registered and Licensed Dietitian	Animal Nutrition	Nutritional assessment; personal wellness/ health
Haub, Mark D.	Assoc Prof	Dept of Human Nutrition	M	White	PhD	Exercise Physiology	Obesity and diabetes prevention
Higgins, Mary Meek	Assoc Prof	Dept of Human Nutrition	F	White	MS, PhD	Foods and Nutrition	Foods and Nutrition
Kidd, Tanda	Asst Prof	Dept of Human Nutrition	F	Black	MS, PhD (RD, LPN)	Hotel, Rest, Inst Mgmt and Dietetics, Human Nutrition	Hotel, Rest, Inst Mgmt and Dietetics, Human Nutrition
Lindshield, Brian	Asst Prof	Dept of Human Nutrition	M	White	PhD	Nutritional Sciences	Human Nutrition
Medeiros, Denis	Prof	Dept Head of Human Nutrition	M	Hispanic	PhD	Physiology, Nutrition	Human Nutrition
Peters, Paula	Assoc Dir and Assoc Prof	Assoc Dir of Extension and Assoc Prof, Dept of Human Nutrition	F	White	PhD	Human Nutrition	
Procter, Sandra	Asst Prof	Dept of Human Nutrition	F	White	MS, PhD	Dietetics & Institutional Mgmt; Human Nutrition	Dietetics & Institutional Mgmt; Human Nutrition
Wang, Weiqun (George)	Assoc Prof	Dept of Human Nutrition	M	Chinese American	PhD	Animal Physiology and Biochemistry	Nutrient metabolism, functional foods for chronic disease prevention

Department/Specialty Area		Public Health Physical Activity					
Barstow, Thomas	Prof	Dept of Kinesiology	M	White	PhD	Physical Education, Physiology	Exercise Physiology, Muscle Physiology
Dzewaltowski, David	Prof	Head, Dept of Kinesiology	M	White	PhD	Sport Behavior, Sport and Exercise Psych	PH Physical Activity
Harms, Craig	Assoc Prof	Dept of Kinesiology	M	White	PhD	Exercise Physiology	Exercise Physiology
Heinrich, Katie	Asst Prof	Dept of Kinesiology	F	White	PhD	Sports and Exercise Psychology, Health Psychology and Education	Physical Activity and Public Health
Kaczynski, Andrew	Ass Prof	Dept of Kinesiology	M	White	MS, PhD	Recreation, Park and Tourism Sciences, Recreation and Leisure Studies	Recreation, Park and Tourism Sciences, Recreation and Leisure Studies
McElroy, Mary	Prof	Dept of Kinesiology	F	White	MA, PhD	Public Health Physical Activity	Public Health Physical Activity
Musch, Timothy	Prof	Dept of Kinesiology and Dept of Anatomy & Physiology	M	White	MA, PhD	Exercise Physiology	Exercise Physiology, Anatomy and Physiology
Poole, David	Prof	Dept of Kinesiology and Dept of Anatomy & Physiology	M	White	DSc, MS, PhD	Physiology	Exercise Physiology
Department/Specialty Area		Support all Specialty Areas					
Brannon, Laura	Assoc Prof	Dept of Psychology	F	White	PhD	Psychology, Social Psychology, Quantitative and Cognitive Psychology	Social Psychology, Attitudes and Persuasion
Galitzer, Steven J.	Dir	Dir, Dept of Environmental Health and Safety	M	White	PhD	Toxicology	N/A
Gordon, Joye	Prof	A.Q. Miller School of Journalism and Mass Comm	F	White	PhD	Communication	Journalism and Mass Communication
Harris, Brandon S.	Asst Prof	Dept of Special Education	M	White	PhD	Sport and Exercise Psychology	Research, statistics, practica, sport and exercise psychology
McDaniel, Brenda Lee	Asst Prof	Dept of Psychology	F	White	PhD	Psychology	Moral identity development, trauma in childhood, health in intimate relationships

## V. Self-Evaluation of Academic Degree

### A. Quality of the Academic CIP Degree

The Master of Public Health degree has long been considered the most appropriate “terminal” professional graduate degree for the nation’s public health workforce in middle to upper management. As part of accreditation standards, the program tracks graduates’ success in obtaining employment within 12 months of graduation. Using that metric, for AY 2008-2010, 100% of the graduates of the Kansas State University MPH Program seeking employment have found job placement within 12 months of graduation. Their jobs have been in a broad range of occupations, to include local, state, and federal governmental agencies, private veterinary practice, non-governmental agencies, and other health-related organizations. A few of our graduates have returned for further education toward advanced academic (Ph.D.) or professional (D.V.M. or M.D.) degrees. Also, included is data on the students that graduated during AY 2011.

Table 5.A.1. Destination of graduates by emphasis area for each of the last 4 years (AY 2008-2011)								
Destination	Food Safety/ Biosecurity		Infectious Diseases/ Zoonoses		Public Health Nutrition		Public Health Physical Activity	
AY 2008 (6 graduates)								
Employed	1	17%	3	50%			2	33%
Continuing education/ training								
Actively seeking employment								
Not seeking employment (by choice)								
Unknown								
Total	1	17%	3	50%			2	33%

Destination	Food Safety/ Biosecurity		Infectious Diseases/ Zoonoses		Public Health Nutrition		Public Health Physical Activity	
AY 2009 (10 graduates)								
Employed	2	20%	6	60%				
Continuing education/ training					1	10%	1	10%
Actively seeking employment								
Not seeking employment (by choice)								
Unknown								
Total	2	20%	6	60%	1	10%	1	10%

Destination	Food Safety/ Biosecurity		Infectious Diseases/ Zoonoses		Public Health Nutrition		Public Health Physical Activity	
AY 2010 (9 graduates)								
Employed	1	11%	4		2			
Continuing education/ training					1	11%		
Actively seeking employment								
Not seeking employment (by choice)			1					
Unknown								
Total	1	11%	5	56%	3	33%		

Destination	Food Safety/ Biosecurity		Infectious Diseases/ Zoonoses		Public Health Nutrition		Public Health Physical Activity	
AY 2011 (13 graduates)								
Employed	1	7.7%	4	31%	1	7.7%		
Continuing education/ training					1	7.7%	1	7.7%
Actively seeking employment			3	23%				
Not seeking employment (by choice)								
Unknown			1	7.7%				
Total	1	7.7%	9	69%	2	15%	1	7.7%

### B. Quality of the Students in the CIP Degree

The MPH program has sought a diverse, knowledgeable group of students, and it succeeded. Diversity has increased every year, from 88% Caucasian in 2009 to 79% in 2011. For the past five years, full admission rates were very high—88% of all applications. The students included 3 Muskie fellows, 4 Fulbright scholars, and 1 Truman Scholar. The average GPA of all graduates was 3.80, with 96.9% of all their grades in the five core areas of public health being an A or B. At the present time, with a target of 100%, grades of A and B received by all MPH students in core public health courses are now at 97.5%.



The tables below summarize the quality of students admitted to the program.

Table 5.B.1. Summary of student qualifications				
Academic Year	Admit Status		Dismissed	Comments
	Full/ Provisional	Probation		
2004	11	1	0	
2005	2	1	0	
2006	7	3	0	
2007	6	1	0	
2008	9	3	0	
2009	11	1	0	
2010	30	6	0	1 Muskie Fellow; 1 Fulbright Scholar (did not enroll)
2011	30	5	0	1 Truman Scholar, 2 Fulbright Scholars, 2 former Muskie Fellows
2012*	23	3	0	1 Fulbright Scholar

\*Still accepting applications for Spring and Summer 2012.

Table 5.B.2. Summary of average GPAs for program graduates					
Academic Year	Number of Graduates	Average GPA	Overall GPA by Emphasis Area		
			Emphasis Area	Total Graduates	Average GPA
2005	1	3.70	Food Safety/Biosecurity	6	3.65
2006	5	3.82	Infectious Diseases/Zoonoses	28	3.79
2007	6	3.84	Public Health Nutrition	9	3.92
2008	6	3.68	Public Health Physical Activity	7	3.83
2009	10	3.74			
2010	9	3.79	Average GPA of all graduates	3.80	
2011	13	3.83			

The table below summarizes the demographic and diversity characteristics of the current MPH student.

<b>Table 5.B.3. Demographic characteristics of current MPH students (Fall 2011)</b>							
	2011			Kansas Residents		Non Kansas Residents	
	M	F		M	F	M	F
African American	4	3		2	2		1
American Indian	1			1			
Asian	3	4			1		
Caucasian	19	56		11	40	8	15
Hispanic	1	2			1	1	1
Other		1					
International						5	5
<b>Total</b>	<b>28</b>	<b>66</b>		<b>14</b>	<b>44</b>	<b>14</b>	<b>22</b>

### C. Student Demand for the CIP Degree

Student demand for the degree program across the nation remains high. The MPH program at K-State is unique in its focus and positioning with the four emphasis areas. Very few schools offer an MPH with emphasis areas in: Food Safety and Biosecurity; Infectious Diseases/Zoonoses; Public Health Nutrition; and Public Health Physical Activity.

The table below outlines the demand for the program and the growth in enrollment since 2010 along with graduation numbers.

<b>Table 5.C.1. Yearly Admissions to the MPH Program</b>			
<b>Academic Year</b>	<b>Admitted</b>	<b>Enrolled</b>	<b>Graduated</b>
2004	12	12	
2005	3	3	1
2006	11	11	5
2007	7	7	6
2008	12	12	6
2009	14	14	10
2010	49	35	9
2011	44	36	13
2012*	30	24	

\*Still accepting applications for Spring, Summer 2012.

Students attracted to our program have included:

- Current CVM students in the College of Veterinary Medicine. These students are interested in the dual DVM/MPH degree.
- Students applying to Veterinary or Medical School.
- Veterinarian, Physicians, and Nurses seeking more education or a career change.
- Undergraduates in Animal Sciences and Industry, Athletic Training, Biochemistry, Biology, Dietetics, Food Science & Industry, Kinesiology, Life Sciences, Microbiology, Nutritional Sciences, Nutrition and Kinesiology dual degree, Psychology, Public Health Nutrition
- Other members of the health workforce who wish to expand their public health knowledge and credentials.

#### **D. Employment Demand for Students in the CIP Degree**

Events in the opening years of the 21<sup>st</sup> century have reinforced and confirmed the need for public health professionals. The ever growing world-wide obesity epidemic is only the tip of the iceberg. Other health issues facing us include: lack of health care for a growing population of medically indigent; an aging population; impending crises foreshadowed by natural disasters and acts of bioterrorism; in addition to outbreaks of emerging zoonotic infectious diseases.

The public health infrastructure in the U.S. is dependent on people and requires a workforce that can meet the continuing and emerging challenges placed upon the health care system. As the population ages and becomes increasingly diverse, the need for public health services will expand and, as they do, so will the number of jobs.

The convergence of animal, human, and environmental health issues has created the need for veterinarians with a level of knowledge and skills that is not being achieved by either new graduates or the current pool of veterinarians (*J Vet Med Educ* 30:287-294, 2003). Unprecedented changes in food animal production and health, human and animal demographics, diseases, concern for animal well-being and welfare, antibiotic resistance, and biotechnology are occurring. In addition, increasing threats to animal populations and the food supply from the introduction of exotic animal diseases, either accidentally or intentionally, requires a much larger nucleus of veterinarians with training in population health concepts if the State of Kansas and the U.S. are to be prepared to manage exotic disease outbreaks and maintain the security of the food supply. Farm to consumer food safety programs, driven by both market and regulatory forces; require veterinarians and food safety inspectors with a broad base of knowledge and skills in public health and population medicine.

The table in part A (Table 5.A.1.) demonstrates the employment demand of the program's graduates, with 100% of the graduates in 2008-2010 obtaining employment within 12 months of graduation.

## **VI. Cost Effectiveness**

The program incurs very little direct costs, limited to a .75 FTE for the Program Director, the .50 FTE for Program Assistant, and operating expenses. The total of such expenditures were less than \$150,000. Supporting colleges and departments pay the costs related to faculty involved with this interdisciplinary program. All tuition income flows to the central university funds and re-distributed to campus units, based on historical funding.

## **VII. Additional Information**

A recent Council on Education for Public Health (CEPH) consultant advised that the program is inadequately funded, and there are not enough resources flowing to the program from student tuition to “react” to the needs of our students and faculty, in order to provide a quality graduate experience. For example, the tuition does not stream to the sites of increased workload related to our significant enrollment growth. Also, the consultant advised us that the organization and structure does not provide an adequate “feedback loop” for the program administration to influence necessary changes in course content and instruction for the degree program. These issues must be resolved before the program can get accredited.