

**University of Miami Graduate Programs in Public Health  
Self-Study Document Table of Contents**

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## Glossary

### A

AARP- Association of American Retired Persons  
ABC for Health- Advocacy and Benefits Counseling for Health  
ACGME- Accreditation Council for Graduate Medical Education  
ACME- Accreditation Commission for Midwifery Education  
ADA – Americans with Disabilities Act  
AHA- American Heart Association  
AMA- American Medical Association  
AMA-MSS- American Medical Association Medical Student Section  
AMC- American Medical Contribution  
AMSA- American Medical Student Association  
ANOVA- Analysis of Variance  
APHA- American Public Health Association  
APT- Appointments, Promotion and Tenure  
ARNP- Advanced Registered Nurse Practitioner  
ASPH- Association of Schools of Public Health  
AYUDA- American Youth Understanding Diabetes Abroad

### B

BCCC- Biostatistics Collaboration and Consulting Core  
BIOSIS- Basic Input-Output System  
BRIDGES- Bringing Research in Diabetes to Global Environments and Systems  
BSFT- Brief Strategic Family Therapy  
BSPH- Bachelor's of Science in Public Health  
BST- Biostatistics

### C

CABs- Community Advisory Boards  
CBPR- Community-Based Participatory Research  
CDC- Centers for Disease Control  
CDC-NPCR- Center for Disease Control and Prevention National Program for Cancer Registries  
CEO- Chief Executive officer  
CEPH- Council on Education for Public Health  
CFAR- Center for AIDS Research  
CFO- Chief Financial officer  
CFS- Center of Family Studies Building  
Florida CHAIN- Florida Community Health Action Information Network  
CINHAL- Cumulative Index to Nursing and Allied Health Literature  
CITI- Collaborative Institutional Training Initiative  
CMA- Christian Medical Association  
COI- Conflict of Interest  
CPH- Certified in Public Health  
CRA- Clinical Research Associate  
CRB- Clinical Research Building  
CTSI- Clinical and Translational Science Institute

CV- Curriculum Vitae

**D**

DCO- Disparities and Community Outreach Core  
DDS- Doctor of Dental Surgery  
DO- Doctor of Osteopathic Medicine  
DOCS- Department of Community Service  
DPP- Diabetes Prevention Program  
DrPH- Doctor of Public Health  
DVR- Division of Veterinary Resources

**E**

EdD- Doctor of Education  
ELAM- Executive Leadership in Academic Medicine  
EO/AA- Equal opportunity/affirmative action  
EPA- Environmental Protection Agency  
EPH- Epidemiology and Public Health  
EPI- Epidemiology  
ETS- Educational Testing Service

**F**

FAVACA- Florida Association for Volunteers Action in the Caribbean and Central America  
FCDS- Florida Cancer Data System  
FIU- Florida International University  
Florida SAFE Inc. - Florida Stay Alive From Education Inc.  
FMII- Family Motivational Interviewing Intervention  
FPHI- Florida Public Health Institute  
FTE- Full Time Equivalent  
FY- Fiscal Year

**G**

GEPC- Graduate Executive Policy Committee  
GMAT- Graduate Management Admissions Test  
GPA- Grade Point Average  
GRE- Graduate Record Examination  
GRECC- Geriatrics, Research, Education and Clinical Center

**H**

HARC- Healthy Aging Regional Collaborative  
HBCUs- Historically Black Colleges and Universities  
HC- Head count  
HCHS/SOL- Hispanic Community Health Study/ Study of Latinos  
HIP- Health Information Project, Inc.  
HIPAA- Health Insurance Portability and Accountability Act  
HIV- Human Immunodeficiency Virus  
HPV- Human Papilloma Virus  
HR- Human Resources  
HRSA- Health Resources and Services Administration

**I**

ICD-O-3- International Classification of Diseases Oncology 3<sup>rd</sup> edition  
 ICEMR- International Centers for Excellence for Malaria Research  
 ICMR- Indian Council of Medical Research  
 ICR- Indirect Cost revenue  
 IDC- Indirect Cost  
 IDF- International Diabetes Federation  
 IELTS- International English Testing System  
 IES- Institute of Education Sciences  
 IMAG- Integrative Medical Advisory Group  
 IRB- Institutional Review Board  
 ISS- International Student and Scholar Services  
 IT- Information Technologies

**J**

JD- Juris Doctorate  
 JMH- Jackson Memorial Hospital  
 JWI- Jay Weiss Institute for Health Equity

**K**

KSU- King Saud University

**L**

LCME- Liaison Committee on Medical Education  
 LDN- Licensed Dietician/Nutritionist  
 LDTC- Learning Disabilities Teacher Consultant  
 LGBT- Lesbian Gay Bisexual Transgender  
 LMHC- Licensed Mental Health Counselor  
 LNHI- Latinos for National Health Insurance  
 LSAT- Law School Admissions Test

**M**

M.Arch- Master of Architecture  
 MA- Master of Arts  
 MAIA- Master of Arts in International Administration  
 MBA- Master of Business Administration  
 MBBS- *Medicinae Baccalaureus, Baccalaureus Chirurgiae* (Bachelor of Medicine, Bachelor of Surgery)  
 MCAT- Medical College Admissions Test  
 MD/MPH- Medical Degree/Master of Public Health  
 MDCHD- Miami-Dade County Health Department  
 MDFT- Multidimensional Family Therapy  
 MPA- Master of Public Administration  
 MPH- Master of Public Health  
 MS- Master of Science  
 MSFC- Medical Students for Choice  
 MEd- Master of Science in Education

MSN- Master of Science in Nursing  
MSOM- Miller School of Medicine  
MSPH- Master of Science in Public Health  
MSW- Master of Social Work  
MTH- Mathematics  
MUJER- Men and Women United in Justice Education and Reform

**N**

NAACCR- North American Association of Central Cancer Registries  
NAGPS- National Association of Graduate Professional Students  
NBPHE- National Board of Public Health Examiners  
NCI- National Cancer Institute  
NCSS/PASS- Number Cruncher Statistical System/Power Analysis and Sample Size  
NEI- National Eye Institute  
NGOs- Non-Governmental Organizations  
NHLBI- National Heart, Lung and Blood Institute  
NIA- National Institute on Aging  
NIAAA- National Institute of Alcohol Abuse and Alcoholism  
NIAID- National Institute of Allergy and Infectious Disease  
NIAMS- National Institute of Arthritis and Musculoskeletal and Skin Diseases  
NIDA- National Institute of Drug Abuse  
NIEH- National Institute of Environmental Health  
NIEHS- National Institute of Environmental Health Sciences  
NIGMS- National Institute of General Medical Sciences  
NIH- National Institutes of Health  
NIMH- National Institute of Mental Health  
NIOSH ERC- National Institute of Occupational Safety and Health Education and Research Centers

**O**

OEG- Ocular Epidemiology Group  
OFAS- Office of Financial Services  
OGPS – Office of Graduate and Postdoctoral Studies

**P**

PAH- Polycyclic aromatic hydrocarbons  
PAHO- Pan American Health Organization  
PAP- Papanicolau Building  
PhD- Doctor of Philosophy  
PHR- Physicians for Human Rights  
PHSA- Public Health Student Association  
PI – Principal Investigator  
Prenatal C.A.R.E. program- Prenatal Collaboration Allows Real Empowerment Program  
Project SHARE- Sharing HIV/AIDS Research Efforts  
PsyD- Doctor of Psychology

**Q**

**R**

RCR- Responsible Conduct of Research

RMC-WO- Recovery Management Checkups for Women Offenders

RN- Registered Nurse

**S**

SACM- Saudi Arabian Cultural Mission

SACS- Southeaster Association of Colleges and Schools

SAFE- Stay Alive from Education

SAS- Statistical Analysis System

SEEDS- Scientists and Engineers Expanding Diversity and Success

SFR- Student/faculty ratio

SMS- Science Made Sensible

SOPHAS- Schools of Public Health Application Service

SPARK- Students Promoting Action, Responsibility, and Knowledge

SPSS- Statistical Package for the Social Sciences

**T**

TEAC- Teacher Accreditation Council

TEPINET- Training Programs in Epidemiology and Public Health Intervention Network

TOEFL- Test of English as a Foreign Language

**U**

UM- University of Miami

UMHC- University of Miami Hospital and Clinics

UMMSOM- University of Miami Miller School of Medicine

UMORG- University of Miami Occupational Research Group

USAID- United States Agency for International Development

**V**

VA- Veterans Administration Hospital

**W**

WHO- World Health Organization

WIAM- Women in Academic Medicine

WIC- Women, Infant and Children

**X****Y****Z**

## Criterion 2.0

### Instructional Programs

**2.1. Degree Offerings.** The program shall offer instructional programs reflecting its stated mission and goals, leading to the Master of Public Health (MPH) or equivalent professional master's degree. The program may offer a generalist MPH degree and/or an MPH with areas of specialization. The program, depending on how it defines the unit of accreditation, may offer other degrees, if consistent with its mission and resources.

*a. An instructional matrix presenting all the program's degree programs and areas of specialization, including bachelors, masters and doctoral degrees, as appropriate. If multiple areas of specialization are available, these should be included. The matrix should distinguish between professional and academic degrees for all graduate degrees offered and should identify any programs that are offered in distance learning or other formats. Non-degree programs, such as certificates or continuing education, should not be included in the matrix.*

Table 2.1.a, below, is an instructional matrix presenting all the program's degrees and specializations.

<b>Table 2.1.a.: Instructional Matrix – Degrees and Specializations</b>		
	<b>Academic</b>	<b>Professional</b>
<b>Masters Degrees</b>		
<i>Specialization/Concentration/Focus Area</i>		
Master of Public Health (MPH)		X
Master of Science in Public Health (MSPH)	X	
Master of Science in Biostatistics (MS)	X	
<b>Doctoral Degrees</b>		
<i>Specialization/Concentration/Focus Area</i>		
Doctorate in Epidemiology (PhD)	X	
Doctorate in Biostatistics (PhD)	X	
<b>Joint Degrees</b>		
<i>2<sup>nd</sup> (non-public health) area</i>		
Master of Arts in International Administration (MAIA/MPH)		X
Medical Doctorate (MD/MPH)		X
Juris Doctorate (JD/MPH)		X
Master of Public Administration (MPA/MPH)		X
Medical Doctorate (MD/PhD)	X	

The Graduate Programs in Public Health offers two generalist public health degrees at the master's level, the Master of Public Health (MPH) and the Master of Science in Public Health (MSPH). At the doctoral level, the PhD in Epidemiology degree is offered in addition to the dual MD/PhD degree in Epidemiology. Since the programs' last accreditation in 2006, two

new degree programs have been introduced in Biostatistics: a Master's and a Doctoral degree.

The dual degree programs have remained the same since the last accreditation, which include the MAIA/MPH, the JD/MPH, the MPA/MPH and the MD/MPH, however the curriculum and format for the MD/MPH degree has been revised. Students completing both the MD and MPH degree previously earned both degrees in a 5 year period, taking a one year leave from the four year MD program (typically after their second year) to complete the MPH. The Graduate Programs in Public Health and the Miller School of Medicine now offer an innovative four year MD/MPH curriculum. Students enrolled in this dual degree program enter as a unique medical school cohort and pursue public health coursework as a single cohort throughout their four years of medical school. Traditional MD students continue to have the option of pursuing the MPH outside of the MD program for a total of five years of study.

The Graduate Programs in Public Health offers all degree programs in a traditional, on-campus format. The program does not offer any degree programs via distance learning.

*b. The bulletin or other official publication, which describes all degree programs listed in the instructional matrix, including a list of required courses and their course descriptions. The bulletin or other official publication may be online, with appropriate links noted.*

The Graduate Programs website is the primary source for all official descriptions of degree offerings, program requirements and course descriptions, <http://publichealth.med.miami.edu/graduate>. The Graduate Programs printed materials also provide a similar overview of degree offerings and program requirements.

The course descriptions for all epidemiology, public health and biostatistics courses can be found at <http://publichealth.med.miami.edu/graduate/academic-programs/course-descriptions>.

In addition to the Graduate Programs website, degree program information on all University degrees, including epidemiology, biostatistics and public health, is included in the University of Miami Academic Bulletin, which can be found online at <http://www.miami.edu/index.php/academicbulletin/>.



*c. Assessment of the extent to which this criterion is met and an analysis of the program's strengths, weaknesses and plans relating to this criterion.*

This criterion is met.

#### Strengths

- Detailed degree and course information are available for each degree program.
- Implementation of MS and PhD programs in Biostatistics.
- Implementation of the integrated four-year MD/MPH dual degree.

#### Challenges

- Scheduling complexity and administration coordination with the MD/MPH four-year curriculum and continued growth of the traditional MPH and MSPH degree programs.

#### Plans

- Hiring additional program staff in the Graduate Programs administration unit. In 2014, we will add 2 Graduate Programs staff to the administrative unit.



## Criterion 2.0

### Instructional Programs

**2.2. Program Length.** An MPH degree or equivalent professional master's degree must be at least 42 semester credit units in length.

*a. Definition of a credit with regard to classroom/contact hours.*

The University of Miami operates on the semester system and, for its measure of academic course work, uses academic credits (referred to as semester credits, semester hours, credit hours or credits). An academic credit is given for one 50-minute period a week throughout an academic semester or its equivalent per week for a semester of fifteen weeks or its equivalent in intersession periods and the summer session. The University of Miami academic calendar includes a fall semester (late August-mid December), a spring semester (mid January-early May), which also includes two intersession periods and two summer semesters (each six weeks in length).

Three-credit structured courses in the Graduate Programs are scheduled for 2.5 – 3.0 hours total per week, meeting for one session per week during the fall or spring semesters. Select biostatistics courses for the MPH and MSPH degree programs meet twice per week for 1.25 hours per session. Summer semester courses are typically scheduled for 5.0-6.0 hours total per week, meeting twice per week.

*b. Information about the minimum degree requirements for all professional public health masters degree curricula shown in the instructional matrix. If the program or university uses a unit of academic credit or an academic term different from the standard semester or quarter, this difference should be explained and an equivalency presented in a table or narrative.*

The MPH program requires a minimum of 45 credits to attain the degree. Public health credit requirements across the MPH dual degree programs vary depending on elective credit required and credit reduction arrangements. A detailed outline of credit requirements for each dual degree program with the MPH is provided in Criterion 2.11.

*c. Information about the number of professional public health masters degrees awarded for fewer than 42 semester credit units, or equivalent, over each of the last three years. A summary of the reasons should be included.*

MPH degrees are awarded for fewer than 42 semester credit units in only two scenarios: students entering the degree program with an earned advanced degree or in a university recognized dual degree program (i.e., JD/MPH, MD/MPH, MPA/MPH, MAIA/MPH).

Students entering the MPH degree program with an earned advanced degree (e.g., MD, MBBS, PhD) have already completed coursework with content that is equivalent to many of our electives. These students are required to complete all core competency coursework. Because of their advanced training, students may receive a 9 credit waiver equivalent to three classes toward elective credit only, completing the degree by earning 36 credits total.

The number of students completing the MPH with less than 42 public health credits, either through qualification for the 9 credit elective waiver or dual degree credit reduction, for the last three years is provided below.

- For 2010 – 2011, two students earned the MPH degree with less than 42 credits. One student entered the program with an earned MBBS degree from Saudi Arabia, the second student completed the MD/MPH program at the Miller School of Medicine in the traditional five year format.
- For 2011 – 2012, four students earned the MPH degree with less than 42 credits. Two students entered the program with an earned advanced degree (MBBS from Saudi Arabia and an MD from Romania), and two students completed dual degree programs at the University of Miami Miller School of Medicine and School of Law (JD/MPH and MD/MPH five year format).
- For 2012 – 2013, sixteen students earned the MPH degree with less than 42 credits. All sixteen students entered the program with an earned advanced degree. Eight of the 16 students entered the program with an earned MBBS degree from Saudi Arabia, two students entered the program with an earned MD degree from the United States, one student entered the program with an earned DDS degree, and five students entered the program with an earned MD degree from another country (i.e., Kuwait, Romania, Aruba and Brussels).

As previously highlighted in Criterion 1.8.viii (Diversity), the Graduate Programs created a recruitment relationship with King Saud University (KSU) in Saudi Arabia, from an existing partnership already established within the Miller School of Medicine in 2010. As a result, interested and qualified graduating physicians from KSU apply for public health training via the MPH program. Admission cohorts from this relationship continue to grow and successful completion of the MPH degree by these students has increased the number of degrees granted with an elective credit waiver.

*d. Assessment of the extent to which this criterion is met and an analysis of the program's strengths, weaknesses and plans relating to this criterion.*

This criterion is met.

#### Strengths

- In response to student feedback, biostatistics courses for the MPH and MSPH degree programs are scheduled for two class sessions per week for 1.25 hours per session.
- Elective credit waiver for students entering the MPH or MSPH with an earned advance degree and elective credit-reduction for dual degree curriculums with public health, which enables us to recruit highly competitive and advanced students trained in other disciplines.
- One-year MPH program is facilitated through innovative scheduling.

#### Challenge

- No option to earn any of the required credits by distance learning.

#### Plans

- Expand dual degree offerings with public health and biostatistics to other pertinent academic areas. University approvals are in place to launch a four plus one program offered in collaboration with the School of Nursing with students eligible for enrollment in 2014/2015.
- Investigate which public health topics are most appropriate for distance learning opportunities and determine appropriate infrastructure required. Discussions with leadership began in Fall 2013 to assess public health's participation in the University of Miami Distance Learning Initiative.



## Criterion 2.0

### Instructional Programs

**2.3. Public Health Core Knowledge.** All graduate professional public health degree students must complete sufficient coursework to attain depth and breadth in the five core areas of public health knowledge. The areas of knowledge basic to public health include the following:

Biostatistics – collection, storage, retrieval, analysis and interpretation of health data; design and analysis of health-related surveys and experiments; and concepts and practice of statistical data analysis;

Epidemiology – distributions and determinants of disease, disabilities and death in human populations; the characteristics and dynamics of human populations; and the natural history of disease and the biologic basis of health;

Environmental health sciences – environmental factors including biological, physical and chemical factors that affect the health of a community;

Health services administration – planning, organization, administration, management, evaluation and policy analysis of health and public health programs; and

Social and behavioral sciences – concepts and methods of social and behavioral sciences relevant to the identification and solution of public health problems.

*a. Identification of the means by which the program assures that all graduate professional public health degree students have fundamental competence in the areas of knowledge basic to public health. If this means is common across the program, it need be described only once. If it varies by degree or specialty area, sufficient information must be provided to assess compliance by each. See CEPH Data Template 2.3.1.*

As stated in the mission of the Graduate Programs in Public Health, we are “committed to developing leaders who can translate knowledge into policy and practice to promote health and prevent disease in human populations”. The Graduate Programs in Public Health requires all graduate professional public health degree students to have fundamental competence in the areas of knowledge basic to public health. This is achieved, in part, through completion of a series of required competency-based core courses.

Table 2.3.a, below, outlines the course numbers, credits, and course titles required of all graduate professional public health degree students. The MPH is a generalist public health degree, and advanced coursework in all five areas basic to public health is available as elective course requirements.

Table 2.3.a.: Curriculum Map for Knowledge Basis to Public Health (MPH)		
Core Knowledge Area	Course Number and Title	Credits
Cross cutting	EPH 500 Introduction to Public Health*	3
Biostatistics	EPH 501 Medical Biostatistics I	3
	EPH 502 Medical Biostatistics II**	3
Epidemiology	EPH 521 Fundamentals of Epidemiology	3
Environmental Health	EPH 541 Environmental Health	3
Health Services Administration	EPH 631 Public Health Administration - OR - EPH 632 US Health Systems	3
Behavioral Sciences/Health Education	EPH 520 Health Education and Behavior -OR - EPH 614 Introduction to Disease Prevention and Health Promotion	3

*\*Beginning Fall 2013, the MPH degree program requires EPH 500 Introduction to Public Health.*

*\*\*Prior to Fall 2013, both EPH 501 and EPH 502 were required courses for the MPH degree. EPH 501 remains a requirement.*

To ensure that students are able to apply statistical reasoning and quantitative methods, the required introductory biostatistics course includes a computer lab complement. Teaching Assistants conduct lab sessions, which include summarizing concepts from class, demonstrating problem solving with and without software, answering questions and reinforcing the use of statistics to solve public health issues.



Courses offered in the five core areas of public health are reviewed by the Curriculum Committee and Graduate Programs administration on a regular basis and updated (or equivalent substitution courses are added) as needed to keep current with professional guidelines, and advances in research and practice in each appropriate area of public health.

Given the varied statistical background of our entering MPH students, the Graduate Programs has developed a non-credit, on-line remedial biostatistics course. Based on a student's performance on the biostatistics pre-test, taken prior to their first term of study, tutorials may be recommended to refresh their statistical skills. Included are online quizzes, webinars, and on-line office hours. Seth Schwartz, an Associate Professor in the Department of Public Health Sciences, works with each student to ensure that they are all prepared for the rigors of EPH 501 Medical Biostatistics I.

For the health services administration and the behavioral sciences/health education requirements, students choose between two courses to meet the core knowledge areas.

*b. Assessment of the extent to which this criterion is met and an analysis of the program's strengths, weaknesses and plans relating to this criterion.*

This criterion is met.

#### Strengths

- The addition of EPH 500 Introduction to Public Health as a requirement for the MPH degree program sets a context for the more detailed core courses that follow, and provides a comprehensive first exposure to the core areas of public health.
- Additional course options for fulfilling requirements in health services administration and behavioral sciences/health education.
- Availability of faculty directed remedial biostatistics coursework prior to enrollment in EPH 501 Medical Biostatistics I, and the addition of a computer lab requirement during EPH 501 course enrollment.

#### Challenge

- Levels of student participation in the remedial biostatistics coursework prior to enrollment have been uneven. When launched in 2012, participation was recommended, but not mandatory.

#### Plan

- In 2013, participation in the remedial biostatistics course for those who do not pass the pre-test was made mandatory. Effectiveness of this course will be evaluated over the next two years.



## Criterion 2.0

### Instructional Programs

**2.4. Practical Skills.** All graduate professional public health degree students must develop skills in basic public health concepts and demonstrate the application of these concepts through a practice experience that is relevant to students' areas of specialization.

*a. Description of the programs' policies and procedures regarding practice placements, including the following: selection of sites, methods for approving preceptors, opportunities for orientation and support for preceptors, approaches for faculty supervision of students, means of evaluating student performance, means of evaluating practice placement sites and preceptor qualifications, and criteria for waiving, altering or reducing the experience, if applicable.*

The Graduate Programs in Public Health recognizes the important educational value of professional degree students completing a practice experience. Through the field experience and engagement with agencies and communities, contributions made by students and their advisors locally and globally serve as an extension of the program's service mission.

The field experience requirement offers students the opportunity to integrate and apply classroom learning in a public health work environment, while enabling them to observe and learn from professionals in the field. The field experience places students in health-related settings (local, national, and international) to work on projects of *mutual interest* to the field organization/agency and the student. All graduate professional public health students (MPH) are required to complete a practice experience of 150 or more contact hours in their selected field placement; no waivers are granted.

Students must complete a field experience outside of their employment setting, with a supervisor different from their usual employer. Students are required to register for EPH 680 Capstone Field Experience for three credits when pursuing their field experience.

#### Field Experience Policies and Procedures

Students may initiate the field experience after successfully completing a minimum of 9 credits in public health coursework. However, MPH students do not begin their culminating project until the successful completion of their 150 hours of field work and after additional coursework in the MPH program (typically an additional 9 – 15 credits). The formal capstone advising process was instituted to ensure the students work with the faculty advisors to apply the public health competencies and integrate knowledge and skills gained throughout the curriculum into the field experience and culminating project.

The minimum credit requirement to initiate the field experience was updated in 2012-13 to accommodate, in part, the structured lock-step curriculum of the MD/MPH dual degree program. Students in this program complete 12 credits of core required public health coursework during their first year of medical school. These students have available a limited amount of unscheduled course time at the conclusion of their first year to begin their field experience contact hours. Field experience proposals, including the learning objectives and activities, are carefully reviewed by the assigned capstone faculty advisor and the Capstone Supervisor prior to the student beginning any field work. This rigorous review and approval process ensures that the learning objectives and activities provide the student with an opportunity to learn in a public health work environment. Their culminating project does not begin typically until after the completion of year 2 of medical school and the completion of 24 MPH credit hours.

The current field experience requirements include:

- Meet with the Capstone Supervisor to receive and review the student handbook; discuss requirements and process; receive a Capstone Faculty Advisor assignment based on area of interest
- Meet with the assigned Capstone Faculty Advisor to select/approve the field site, identify the Community Partner (site preceptor), discuss the field experience proposal, public health significance and scope of the work
- Meet with the Community Partner (site preceptor) to develop learning objectives, goals and activities; review the Community Partner Agreement Form
- Submit the field experience proposal and signed Community Partner Agreement Form to the Capstone Supervisor for approval
- Register for EPH 680 Capstone Field Experience
- Complete contact hours in the field, completing a minimum of 150 work hours and document hours and activities (daily log)
- Schedule and attend evaluation session with the Community Partner; the site preceptor will complete the Community Partner Evaluation Form to rate the student's performance
- Submit Field Experience Report and log of hours to the Community Partner for review and signature
- Capstone Faculty Advisor reviews report, evaluation and assigns a final grade (pass/fail)
- Submit Field Experience Report to the Capstone Supervisor

Detailed information on the field experience procedures and requirements, the EPH 680/681 Capstone Experience Handbook, is available online at <http://publichealth.med.miami.edu/graduate/current-students/handbooks>, and through the office of the Capstone Supervisor.

### Selection of Sites

Students have flexibility in selecting a field experience site. The Graduate Programs in Public Health has established relationships with numerous local, national and international organizations. Students may select one of these sites or may initiate a new relationship. New partnerships or sites are assessed by the Director of Public Health Programs, in consultation with the Capstone Supervisor, for appropriateness, feasibility for fulfilling student learning objectives and safety. Students select their field experience in consultation with the Capstone Supervisor and their assigned Capstone Faculty Advisor. The selection of a field experience is guided by the student's area of academic and professional interest, along with broader career goals. The selection process varies depending on the student. For some students, the organization or site is the first decision in developing their field experience.

Students may also approach the process with a general area of interest or general population with whom they wish to work first and obtain assistance in determining a site where their interests can be actualized.

### Approving Preceptors

A community partner (site preceptor) must be identified for each field experience. The community partner is responsible for supervising, mentoring, and evaluating the student during their field experience. The community partner is a member of the public health practice community and must have expertise in the selected project area, status within the agency, and an interest and competence in supervising and mentoring. All community partners are reviewed and approved by the Capstone Supervisor and Capstone Faculty Advisor under the direction of the Director of Public Health Programs before the student can begin field experience contact hours. At the start of the field experience, the Capstone Supervisor will provide a copy of the [EPH 680/681 Capstone Experience Handbook](#) and communicate what is expected of the student and the agency throughout the field experience. The handbook is also available online at the Graduate Programs website. Students will develop learning objectives for the field experience, which are used to formulate a signed agreement between the student and the community partner. This contract, the Community Partner Agreement Form, assists both the student and the community partner in clarifying expectations and responsibilities.

While each supervised field experience will be unique, the community partner and sponsoring agency should provide the student with:

- An orientation to the public health organization or agency
- Exposure to the agency's administrative and management functions, and the community partner's leadership qualities
- Participation in the agency's activities
- An opportunity to show competency in basic public health practice and proficiency in a defined area of interest

- An opportunity to achieve specified learning objectives, as agreed upon by the student, community partner and Capstone Faculty Advisor
- An opportunity to demonstrate communication skills and
- Identification of a topic area or project for the Capstone Project (see Criterion 2.5)

Representatives from agencies who have previously sponsored a field experience or new agencies forming a relationship with the Graduate Programs are invited to speak at a speaker series throughout each academic year. This provides students with an opportunity to learn of different field experience opportunities and meet directly with potential community partners. The speaker series also provides an opportunity for Graduate Programs administration to further inform and orient community partners to the field experience requirements.

#### Opportunities for Orientation and Support for Preceptors

All community partners are provided with a copy of the EPH 680/681 Capstone Experience Handbook at the start of the field experience. Throughout each student's field experience, the Capstone Supervisor is the primary program contact for the community partner for any questions on responsibilities, evaluation or areas of concern. During the field experience, visits by the Capstone Supervisor may occur if deemed necessary or beneficial by the student or community partner. Site visits are planned and scheduled in advance with the appropriate audience and are conducted to appraise the planned educational experience, assess the student's progress and resolve any questions or concerns that may have arisen.

#### Faculty Supervision

A total of 10 faculty members serve as Capstone Faculty Advisors for the capstone experience comprised of the field experience and the culminating project. Faculty members are assigned from the Department of Public Health Sciences and UMMSOM to work with the students. Capstone Faculty Advisors have the academic authority to approve all required capstone experience documents, including the Community Partner Agreement Form, the Field Experience Proposal, and Field Experience Report and assign the final pass/fail grade in collaboration with Graduate Programs. The Capstone Supervisor and Director of Public Health Programs assign students to a Capstone Faculty Advisor based on the student's area of interest and degree program.

#### Evaluation

Each student is required to complete a minimum of 150 contact hours during their field experience. At the conclusion of this experience, the community partner completes the Community Partner Evaluation Form, and discusses the scores/results with the student. The evaluation form consists of 25 questions, using a 5-point Likert scale to rate the student's skills, competency in meeting the learning objectives, professionalism, and adaptability to the work environment and communication skills. Community partners are encouraged to provide a

written evaluation in addition to the Community Partner Evaluation Form. The narrative may address in greater detail the strengths and weaknesses of the student as a potential public health professional; comments regarding the student's academic preparedness for serving as a public health professional; and recommendations for a final grade (pass/fail). The Community Partner Evaluation Form is included as an appendix in the [EPH 680/681 Capstone Experience Handbook](#). The complete handbook is available online and in the resource files under practicum and internship and culminating experience.

In addition to the evaluation form completed by the community partner, the student is required to complete an evaluation form rating their field placement experience. The Field Experience Student Evaluation Form consists of 11 questions rating on a 5-point Likert scale, and four additional text (open-ended) questions. The student evaluation form allows the student to provide feedback to the Capstone Supervisor, Capstone Faculty Advisors and Graduate Program administration on how successful the field experience was, how closely it aligned with the specified learning objectives, and how requirements were met with the support of the community partner and the agency/organization. The Field Experience Student Evaluation Form is included as an appendix in the [EPH 680/681 Capstone Experience Handbook](#).

At the conclusion of the field placement, each student is required to submit a capstone field experience report, which is reviewed, evaluated and given a grade by the assigned Capstone Faculty Advisor. The report includes a description of the agency, a summary of the field experience detailing the tasks and projects completed, the student's contribution to the agency, a personal reflection summary detailing how the experience contributed to professional growth, how activities related to academic coursework, and an assessment of skills and competencies required to complete the experience. The report is approximately 6-10 pages in length. A detailed outline of the report requirements is available to students and community partners in the [EPH 680/681 Capstone Experience Handbook](#). Requirements for the appendices include a copy of the Community Partner Agreement Form, a copy of the Community Partner Evaluation Form, documentation of a minimum of 150 contact hours (daily log), the copy of the Field Experience Student Evaluation Form and other tangible products related to the assisted field experience activities. After the community partner has reviewed and approved the report, the Capstone Faculty Advisor assigns a pass/fail grade.

Representative field experience reports are available for review in the resource files under student work.

*b. Identification of agencies and preceptors used for practice experience for students, by specialty area, for the last two academic years.*

Table 2.4.b, below, provides a list of practice experience sites and preceptors for the last two academic years (2010 – 2012). The list of practice experience sites is sorted by location: local,

national, and international. Table 2.4.b contains information for both the MPH degree program and dual MPH degree programs (including MD/MPH).

<b>Table 2.4.b.: List of Practice Experience Agencies and Preceptors</b>		
<b>South Florida Preceptors</b>		
<b>Preceptors</b>	<b>Agency</b>	<b>Total Students per Preceptor</b>
Tom Albano	Take Stock In Children	1
Monica Alexander, BSN, RN	University of Miami Head and Neck Clinic	2
Rochelle Baer, MSW	LEND Program, Mailman Center for Child Development	1
Emmalee S. Bandstra, MD	Prenatal C.A.R.E. Program	1
Risa Berrin, JD	Health Information Project (HIP)	1
Monica Broome, MD	University of Miami Preventive Medicine Club	4
Scott Burnotes, MS	Office of Emergency Management (UM)	1
Ana Campo, MD	"Let's Talk About it" Miami Dade Public Schools	1
Steve Chavoustie, MD	Medical Students in Action	3
Constance Collins, JD	Lotus House	1
Janiece N. Davis, MPH	Palm Beach County Health Department	1
Claude Fox, PhD	Florida Public Health Institute	1
Elizabeth Franzmann, MD	Department of Otolaryngology	1
Rachel Freeman	Jefferson Reaves Sr. Health Center	1
Lawrence Friedman, MD	University of Miami Department of Adolescent Medicine	1



Sylvia Goncz, MEd	Early Discovery Program	1
Kenneth Goodman, PhD	Clinical and Translational Science Institute	1
Lisa Gwynn, DO, MBA	Mobile Pediatric Clinic	1
Gillian Hotz, PhD	UM Life Project, Concussion Program	2
Lanetta Jordan, MD, MPH, MSPH	Health Services and Policy- CDC Grant	1
Erin Kobetz, PhD, MPH	Jay Weiss Institute for Health Equity	4
Sonjia Kenya, EdD, MS, MA		
Janet Konefal, PhD, MPH, MEd, MA, LDTTC	University of Miami Wellness Advisory Council	1
Jeffrey Lagomacini, MPA	City of Hialeah, Hialeah Healthy Families	1
David Levi, MD	University of Miami Liver Transplant Clinic	1
Elana Mansoor, PsyD	The Families Network	1
Alvaro Mejia- Echeverry, MD, MPH, ARNP	Miami-Dade County Health Department	4
Sarah Messiah, MPH, PhD	Pediatric Obesity Clinic, Prevention Program	2
Claudio Micieli, MD, MPH	MDCHD, Refugee Health Assessment Program	1
Michael Miller, PhD	The Village South	1
Hilda Pantin, PhD	Familias Unidas (University of Miami)	1

Margeret Pereyra, DrPH	University of Miami Sociomedical Science Research Center	1
Kenzie Perry	Hope for Miami	3
Evadine Rampersaud, MSPH, PhD	Hussman Institute of Human Genomics	1
Jasmine Reid, MPH	Florida Heart Research Institute	1
Judith Reiter- Cornelissen	VITAS Inpatient Unit	1
Jean Reynald, MD, MPH	MDCHD, Tuberculosis Control and Prevention Program	3
Judith Robinson	National Alliance on Mental Illness (NAMI)	1
Mark Rosenblum, MPH, MBA, RD, LDN	Women, Infant and Children (WIC)	1
Kenia Sanchez, MSW	University of Miami Division of Adolescent Medicine	1
Lydia Sandoval, RN	Miami Dade County Health Department	1
Carl Schulman, MD, MSPH, PhD	Ryder Trauma Center	3
Connie Siskwoski, MPA	American Association of Caregiving Youth	1
Anne Stewart, MPA	Palm Beach County Drowning Prevention Coalition	1
Mark Stoutenberg, PhD, MSPH	FOGO Wellness Program	3
Melissa Swain, JD	Health and Elder Law Clinic	1
Stephen Symes, MD	Human Rights Clinic	2
Terri Chilthorn	Area Health Education Centers	1
Kira Villamizar	Miami-Dade County Health Department Office of HIV/AIDS	1

Isabel Vittoria, MS, LMHC	United Health Foundation/UM Family Medicine	1
<b>National Preceptors</b>		
Brynne McBride, JD	ABC for Health	1
Corlis Taylor, MPH	Fairbanks Memorial Hospital	1
<b>International Preceptors</b>		
Sami Al Nassar, MD	King Saud University, National First Aid Campaign "RESCUE" (Saudi Arabia)	1
Nelson Arboleda, MD, MPH	Centers for Disease Control, Regional Center in Guatemala	2
Rachel Belt	Project Medishare (Haiti)	1
Maria Virtudes Berroa	Batey Relief Alliance (Dominican Republic)	1
Johann Besserer, MA	IOI- Galapagos (Ecuador)	1
Franklin Bido, MD	Hospital Buen Samaritano (Dominican Republic)	1
Nahida Chakhtoura, MD	Project Medishare Maternal Health Clinic (Haiti)	4
Jessica Chapman	AMOS Health and Hope (Nicaragua)	2
Steven Chavoustie, MD	Medical Students in Action (Dominican Republic)	3
Sandy Del Prado	KausayWasi Clinic (Peru)	1
Christopher M. Dodd, MD, MS	Atencion Primaria en Salud (Nicaragua)	2
Paul Fisher, MS	Pan American Development Foundation (Argentina, Mexico and Colombia)	3
Violet Forsythe- Duke, MD	Ministry of Health of Trinidad and Tobago	1

Derek Lewis	University of Colombia International Family AIDS Program	1
Heather Mortimer-Charoy, MA	MICEFA (France)	1
Sherri Porcelain, MPH, PhD	Public Health in Ticantiki (Panama)	3
Clare Redshaw, PhD	The European Centre for the Environment and Human Health (United Kingdom)	1
Thomas Teuscher, MD, MS	WHO: Roll Back Malaria (United Kingdom)	1

*c. Data on the number of students receiving a waiver of the practice experience for each of the last three years.*

There have been no waivers granted for the practice experience in the last three years. The Graduate Programs in Public Health does not allow professional degree students (MPH or dual MPH) to waive the practice experience.

*d. Data on the number of preventive medicine, occupational medicine, aerospace medicine and general preventive medicine and public health residents completing the academic program for each of the last three years, along with information on their practicum rotations.*

The Graduate Programs in Public Health does not participate in any formal residency programs. Students completing a residency at the Miller School of Medicine or Jackson Memorial Hospital who matriculate into the MPH program complete their practice experience in a similar manner to other non-resident MPH degree students.

*e. Assessment of the extent to which this criterion is met and an analysis of the program's strengths, weaknesses and plans relating to this criterion.*

This criterion is met.

#### Strengths

- Clear and easily accessible policies and procedures assist the student in planning their field experience.
- Students can choose from a variety of field experience sites.
- Field experience projects are mutually beneficial to the selected site/organization and student, as evidenced in the student and community partner evaluations.
- Creation of the Springboard Program to provide financial support for innovative field experiences and capstone projects.
- Global Scholars Awards to MD/MPH students subsidize international field experiences and capstone projects.
- All professional degree students are required to complete a practice experience; waivers are not granted.

#### Challenge

- Monitoring the progress and status of each student engaged in field experiences as the student body increases.

#### Plans

- Secure additional funding for innovative practice experiences in collaboration with the University of Miami Development Office through ongoing efforts of the Department Chair. In 2013, a case for support document was created that outlines specific funding opportunities to support innovative field experiences.
- Establish new methods to connect with public health alumni working in public health practice to expand field placement and community partner options. The Associate Director of Career Services started working closely with the Public Health Alumni Association (PHAA) and the Capstone Supervisor in 2013 to expand these connections.
- Improve tracking and monitoring of student field experiences. In 2013, all student requirements for the field experience were imported to an electronic database (Filemaker) so that every student's progress and requirements can be tracked and monitored.
- Additional Capstone Faculty Advisors will be engaged in 2014.



## Criterion 2.0

### Instructional Programs

**2.5. Culminating Experience.** All graduate professional public health degree programs identified in the instructional matrix shall assure that each student demonstrates skills and integration of knowledge through a culminating experience.

*a. Identification of the culminating experience is required for each professional public health degree program. If this is common across the program's professional degree programs, it need be described only once. If it varies by degree or specialty area, sufficient information must be provided to assess compliance by each.*

All professional public health degree students are required to complete a culminating experience to demonstrate integration and application of competencies developed during academic coursework, the practice field experience and other learning experiences. The required culminating experience for all professional public health degree students in the Graduate Programs in Public Health is the capstone project. The practice field experience detailed in Criterion 2.4 and the capstone project, *together* serve as the total capstone experience for the Master of Public Health program. Students build their capstone experience to support their academic and professional interests. All Master of Public Health degree students are required to complete a culminating experience; no waivers are granted. Students register for [EPH 681 Capstone Project](#) for three credits and complete an expected additional 150 work hours toward the selected project, which are in addition to the contact hours completed for the field experience. Students are not required to document these additional project hours with a daily log; this is only required for the EPH 680 Field Placement contact hours. Students may register for [EPH 680 Capstone Field Experience](#) and [EPH 681 Capstone Project](#) during the same semester or registration may be split between two separate semesters depending on the timeline to complete the entire capstone experience. In either case, a total of 300 work hours are expected.

The capstone project typically builds upon the practice field experience. The topic must be of public health significance. Capstone projects may differ in approach, however all are relevant to the student's academic curriculum and their professional aspirations.

#### Policies and Procedures

Students are encouraged to identify a capstone project topic and approach early in their field experience. The capstone project requirements include:

- Meet with the Community Partner (site preceptor) to discuss capstone project topics relevant to the agency and within the student's interest area
- Meet with the assigned Capstone Faculty Advisor to identify the capstone project topic, approach and scope of work
- Complete the Capstone Project Proposal Form; present for signature by the Community

- Partner, and submit to the Capstone Faculty Advisor for approval and additional signature
- Submit the signed/approved Capstone Project Proposal Form to the Capstone Supervisor
- Register for EPH 681 Capstone Project
- Complete work hours for the project (an expected 150 project hours beyond the documented field placement hours)
- Submit Capstone Project Report to the Capstone Supervisor and Capstone Faculty Advisor
- Capstone Faculty Advisor reviews report and assigns a final grade (pass/fail)
- Present/submit Capstone Project Final Report to the Community Partner (site preceptor)

Detailed information on the capstone project procedures and requirements is available online in the EPH 680/681 Capstone Experience Handbook at <http://publichealth.med.miami.edu/graduate/current-students/handbooks> and through the office of the Capstone Supervisor.

#### Project Topic and Approach

The capstone project allows students to synthesize and integrate knowledge acquired in coursework and other learning experiences and to apply theory and principle in a situation that approximates some aspect of professional practice. While the field experience deliverable focuses on documentation of the placement activities and application in a practical setting, the capstone project deliverable is designed to allow students to take a scholarly approach to a topic of their choosing.

The topic and approach for the capstone project must demonstrate the application of academic learning and public health practice methods. The capstone project may take one of the following approaches:

#### **Program Development**

Applying evidence-based principles, help develop and/or adapt a health promotion program or intervention that could be implemented at the field experience site, including the adaptation of instructions, procedures, manuals and materials as needed

#### **Program Evaluation**

Conduct a formal evaluation of an existing program or intervention to evaluate effectiveness and outcomes

#### **Program Implementation**

Participate in a substantive way towards the implementation of a program or intervention already planned



**Research**

Research the origin of a health problem identified by the field experience site or community partner: a systematic investigation including research development, testing, and evaluation

**Health Policy/Advocacy**

Develop a health policy position paper related to the mission of the field experience site or community partner, and advocate for its approval by the corresponding leadership

Each student submits a capstone project proposal that is first reviewed and approved by the Community Partner (site preceptor) and then forwarded to the assigned Capstone Faculty Advisor for final approval and signature. The capstone proposal includes a brief statement under the following headings: rationale and literature review, project design (including activities, materials and methods), evaluation plan, and dissemination/anticipated outcomes. Content of the proposal will vary depending on the capstone project approach selected.

At the conclusion of the project, students are required to submit a final capstone project report. The form and style of the final capstone project report will vary depending on the topic and approach chosen. The report is approximately 15-25 pages in length. A detailed outline of the capstone project report requirements is available to students and community partners in the [EPH 680/681 Capstone Experience Handbook](#). Report requirements include an appendix with all key materials such as manuals developed, promotion materials, IRB approval (if appropriate), tables, graphs, charts and timelines related to the project. The Capstone Faculty Advisor assigns a pass/fail grade.

Representative capstone project reports are available for review in the resource files under student work.

*b. Assessment of the extent to which this criterion is met and an analysis of the program's strengths, weaknesses and plans relating to this criterion.*

This criterion is met.

#### Strengths

- Clear and easily accessible policies and procedures to assist the student in planning the capstone project.
- Broad number of approaches available to students to demonstrate synthesis and application of the skills and knowledge acquired pursuing their public health degree.
- Supervision by experienced Capstone Faculty Advisors for a seamless transition from the practice experience to the capstone project.
- All professional degree students are required to complete a culminating experience; waivers are not granted.

#### Challenge

- Monitoring the progress and status of each student engaged in the capstone project as the student body increases.

#### Plans

- Secure additional funding for innovative capstone experiences in collaboration with the University of Miami Development Office through ongoing efforts of the Department Chair.
- Establish new methods to connect with public health alumni working in public health practice to expand capstone project opportunities. The Associate Director of Career Services started working closely with the Public Health Alumni Association (PHAA) and the Capstone Supervisor to expand these connections in 2013.
- In 2013, all student requirements for the capstone project were imported to an electronic database (Filemaker) so that every student's progress and requirements can be tracked and monitored.
- Additional Capstone Faculty Advisors will be engaged in 2014.

## Criterion 2.0

### Instructional Programs

**2.6. Required Competencies.** For each degree program and area of specialization within each program identified on the instructional matrix, there shall be clearly stated competencies that guide the development of degree programs. The program must identify competencies for graduate professional, academic and baccalaureate public health degree programs. Additionally, the program must identify competencies for specializations within the degree programs at all levels (bachelors, masters, and doctoral).

*a. Identification of a set of competencies that all graduate professional public health degree students and baccalaureate public health degree students, regardless of concentration or specialty area, must attain. There should be one set for each graduate professional public health degree and baccalaureate public health degree offered by the program (e.g., one set for each BSPH, MPH and DrPH).*

### Competences for Professional Degrees

#### Master of Public Health (MPH)

The Graduate Programs in Public Health requires all graduate professional public health students (MPH) to have fundamental competence in the areas of knowledge basic to public health. Each MPH student is required to complete a series of required competency-based core courses, a practice experience and a capstone project.

Upon completion of the Master of Public Health (MPH) degree, all graduates will be able to:

- Advance and promote the implementation of evidence-based public health practice
- Identify, understand and promote ethical choices, strong values and professionalism in public health practice
- Apply statistical reasoning and quantitative methods for the purpose of analyzing public health data and participating in population-based research
- Explain the role of multi-level occupational and environmental conditions which directly or indirectly impact the health of individuals, communities and populations
- Apply epidemiologic methods to the measurement and study of population health and the prevention of infectious and chronic disease
- Examine the main components and issues of the organization, financing and delivery of health services and public health systems
- Identify social and behavioral concepts, models and theories that form the foundation of health promotion and disease prevention
- Recognize sociocultural factors that promote and inhibit health in vulnerable and underserved populations
- Apply skills and knowledge, and exhibit leadership in public health settings through

planned and supervised experiences related to professional career objectives

*b. Identification of a set of competencies for each concentration, major or specialization (depending on the terminology used by the program) identified in the instructional matrix, including professional and academic degree curricula and baccalaureate public health degree curricula.*

### **Competences for Academic Degrees**

The Graduate Programs in Public Health requires all graduate academic public health master's students (MSPH) to have fundamental competence in the areas of knowledge basic to public health. Each MSPH student is required to complete a series of required competency-based core courses and a master's research project. Competencies for academic degrees in epidemiology (PhD) and biostatistics (MS and PhD) are also provided in this section.

#### Master of Science in Public Health

Upon completion of the Master of Science in Public Health (MSPH) degree, all graduates will be able to:

- Advance and promote the implementation of evidence-based public health practice
- Identify, understand and promote ethical choices, strong values and professionalism in public health practice
- Apply statistical reasoning and quantitative methods for the purpose of analyzing public health data and participating in population-based research
- Identify and apply the most appropriate statistical test for the purpose of performing hypothesis-driven research to solve public health problems
- Explain the role of multi-level occupational and environmental conditions which directly or indirectly impact the health of individuals, communities and populations
- Apply epidemiologic methods to the measurement and study of population health and the prevention of infectious and chronic disease
- Examine the main components and issues of the organization, financing and delivery of health services and public health systems
- Identify social and behavioral concepts, models and theories that form the foundation of health promotion and disease prevention
- Recognize sociocultural factors that promote and inhibit health in vulnerable and underserved populations
- Develop skills to identify public health research questions and hypotheses, analyze data and communicate findings effectively to diverse stakeholders

#### Master of Science in Biostatistics

Upon completion of the Master of Science in Biostatistics (MS) degree, all graduates will be able to:

- Describe the core disciplines of public health and how they apply to improving population

health

- Apply epidemiologic methods to the measurement and study of population health and the prevention of infectious and chronic disease
- Describe concepts in probability theory, random variation and commonly used statistical distributions
- Have a solid grounding in intermediate mathematical statistics
- Develop sample size and power calculations for different study designs including those from clinical trials
- Perform a variety of statistical analyses (estimation and inference) including ANOVA, multiple regression, generalized linear modeling, multivariate analysis, survival analysis, design of experiments, various new techniques from statistical learning theory, analyze longitudinal data and spatial data
- Interpret results from above statistical analyses to draw relevant conclusions from data
- Communicate effectively by producing summary reports, statistical analysis sections of papers, graphical summaries and tabular summaries of the data
- Develop oral presentations of statistical analyses for primarily public health and medical professionals
- Develop a high level of competency in statistical programming both with R and SAS for both managing and analyzing data
- Recognize potential ethical issues and implement the concepts of ethical conduct of research

#### Doctoral Degree of Epidemiology (PhD)

Upon completion of the Doctoral Degree in Epidemiology (PhD) degree, all graduates will be able to:

- Describe the core disciplines of public health and how they apply to improving population health
- Recognize potential ethical issues and implement the concepts of ethical conduct of research in epidemiologic studies
- Design epidemiologic studies applying sound methodology and assess the validity of results
- Develop and implement data collection/management methods and tools needed for performing epidemiology investigations
- Apply quantitative and reasoning skills, as well as content-area knowledge to analyze data from epidemiological studies
- Utilize the application of statistical methods that are critical to epidemiologic inquiry; manage and manipulate data sets in statistical analysis software packages including SAS and R
- Identify major chronic and infectious diseases, their general pathophysiology, descriptive epidemiology and risk factors
- Critically evaluate scientific literature and synthesize the outcomes across studies, balancing limitations and contributions of each study

- Articulate research questions that advance scientific knowledge and develop a proposal for extramural research funding
- Present data at academic and professional meetings and submit scientific papers for publication in high-impact peer-reviewed journals
- Convey epidemiologic concepts to students and peers; effectively communicate epidemiologic information to scientists, policy makers and the public
- Conduct an advanced original research project and demonstrate mastery of the topic area
- Read, plan, develop and present epidemiologic data outside their area of mastery
- Provide consultation to health professionals in conducting epidemiological research; and be prepared to work collaboratively with scientists and practitioners in other fields

#### Doctoral Degree of Biostatistics (PhD)

Upon completion of the Doctoral Degree in Biostatistics (PhD) degree, all graduates will be able to:

- Describe the core disciplines of public health and how they apply to improving population health
- Apply epidemiologic methods to the measurement and study of population health and the prevention of infectious and chronic disease
- Develop novel statistical methodology
  - Identify the limitations of existing methodology and standard techniques for adapting existing methodology to new epidemiological and public health settings
  - Identify epidemiology and public health settings where techniques beyond modification of existing techniques are necessary (i.e. new methodology)
  - Use advanced theory and computation to develop new methodology for addressing research problems in epidemiology and public health
- Analyze complex data from epidemiology, public health and other biomedical settings with subject matter collaborators using cutting edge statistical techniques
  - Read, understand and use the most recent literature in epidemiology, public health, and other biomedical settings relevant to an analytic task
  - Formulate a plan for data gathering, data management and statistical analysis
  - Carry out plan effectively to answer questions of substantive interest in epidemiology, public health and other biomedical settings
- Communicate findings verbally (with collaborators and at conferences), and in writing (journal articles)
  - Prepare a seminar for presentation to either substantive (epidemiology, public health and other biomedical) or statistical audiences
  - Develop the elusive skill of learning a substantive application rapidly by listening effectively to the subject matter specialist and asking pertinent questions as needed

- Integrate statistical concepts into presentations for public health and epidemiology audiences in forms that they will find useful and intelligible
- Prepare clear reports, analysis plans for grant applications and statistical sections of journal articles
- Demonstrate cognate field expertise
  - Develop enough knowledge in a specific subject domain within epidemiology, public health, or other area of biomedical science to communicate easily with scientists in that domain
  - Use this background to formulate new biostatistical problems to solve (the dissertation is the primary example of this)
- Teach graduate students enrolled in public health, statistics and biostatistics courses
  - Learn how to organize a large sequence of lectures so that they follow logically and provide an overview of a topic area in statistics or biostatistics
  - Combine diverse teaching techniques and materials so that students with different learning styles can master the material
- Recognize potential ethical issues and implement the concepts of ethical conduct of research

*c. A matrix that identifies the learning experiences (e.g., specific course or activity within a course, practicum, culminating experience or other degree requirement) by which the competencies defined in Criterion 2.6a and 2.6b are met. If these are common across the program, a single matrix for each degree will suffice. If they vary, sufficient information must be provided to assess compliance by each degree or specialty area. See CEPH Data Template 2.6.1.*

The primary mechanism for assuring students attain core competencies in each degree program is successful completion of both the required coursework and the culminating experience (field experience/project, research project or major paper and dissertation). Together, these provide students with the knowledge and skills necessary to contribute to their selected field of study. A competency matrix is provided for each degree program (academic and professional) in the resource files under competencies.

*d. Analysis of the completed matrix included in Criterion 2.6.c. If changes have been made in the curricula as a result of the observations and analysis, such changes should be described.*

As part of the ongoing self-study process, the Curriculum Committee, in collaboration with the Division Directors, assesses and updates the public health, epidemiology and biostatistics competencies to reflect changes in the evolution of the field. Curriculum changes are a result of regular review processes, faculty and student feedback, ongoing assessment by the accreditation workgroup and changes in public health practice and science. For example, in 2012, the Curriculum Committee changed the core coursework for the MPH degree. In addition

to required coursework in the five basic areas of public health, the MPH degree included required coursework in maternal and child health, health economics and public health nutrition. The latter three courses were removed as core requirements for the MPH and are now included as elective courses. In 2013, EPH 500 Introduction to Public Health was added to the curriculum for all MPH, MSPH, the PhD in Epidemiology programs and both biostatistics degree programs.

The establishment of the Division of Biostatistics and the addition of the MS and PhD in Biostatistics degree programs (2010 – 2011) led to a rigorous evaluation of biostatistics training across all degree programs, including public health and epidemiology. The expansion of available coursework in biostatistics and teaching faculty in this area have contributed to changes in required statistics coursework for the MPH and PhD in Epidemiology programs. Effective Fall 2013, the MPH program and the dual MPH degree programs only require one core course in biostatistics, EPH 501 Medical Biostatistics. The MSPH degree program will continue to require a two-semester medical biostatistics sequence, EPH 501 and EPH 502.

As part of our on-going self-study, the doctoral program in epidemiology underwent a substantive curriculum change in 2010, under the leadership of the Program Director at that time, Dr. Guillermo Prado. Changes to the curriculum were completed to improve the doctoral program and to provide students with additional training in epidemiological methods, biostatistics and ethics. Feedback from meetings with faculty and students guided the changes to the curriculum. In addition, a thorough review of the curriculum and competencies at other top programs in epidemiology around the country was conducted to assure that the Graduate Programs was keeping pace with changes in the field. Curriculum changes for epidemiology have been revised and updated to accurately reflect the program competencies.

*e. Description of the manner in which competencies are developed, used and made available to students.*

Competencies are developed through several mechanisms, with levels of review throughout the Graduate Programs and Department. The Curriculum Committee (whose members include Graduate Programs leadership) has conducted an extensive review of all public health competencies during the 2012-2013 academic year and worked closely with Division leadership to incorporate feedback from teaching faculty in each division. Review and assessment began collaboratively with the Curriculum Committee and accreditation workgroup. Updated competencies were then reviewed by each Division and approved by both the Graduate Executive Policy Committee and the Executive Committee. The competency assessment process includes review of course syllabi and course learning objectives, review of other academic program competencies, examination of materials from professional organizations, faculty feedback and student feedback from course evaluations, student exit surveys, alumni surveys and employer surveys.



Program competencies are made available to students through: a presentation at orientation, student handbooks for individual degree programs, the capstone handbooks for the culminating experiences (EPH 680/681, BST 698/699 and EPH 699), core course syllabi, and the Graduate Programs in Public Health website.

*f. Description of the manner in which the program periodically assesses changing practice or research needs and uses this information to establish the competencies for its educational programs.*

In 2011, the Department restructured into five divisions to reflect the core disciplines of public health and the Department's research and practice expertise. Each division is charged with reviewing changing practice and research needs within its discipline and meets regularly to discuss expansion of curriculum and practical experiences to reflect contemporary research and practice needs. This review includes the development of new specialized coursework in their respective field, e.g. EPH 580 Vector Borne Diseases, EPH 632 US Healthcare Systems and EPH 514 Global Outbreak Investigations. Overseeing this work is the Curriculum Committee, which is responsible to ensure that these additions are aligned with the overall program competencies for our educational program.

Graduate Programs faculty members are prominent speakers at professional meetings within their discipline. Faculty attendance and participation at these meetings provide important opportunities for bringing information back to the educational programs. Graduate Programs leadership and administration routinely participate in seminars, webinars, workshops and national conferences (including those sponsored by APHA and ASPPH) that provide an opportunity to review program competencies and requirements in a broader environment and connect with alumni and other academic and public health professionals.

On an ongoing basis, the Graduate Programs ensures that students in the field are meeting the needs of community partners. This is done via the preceptor survey that assesses whether the students' preparation meets the needs of public health practice. Program competencies and student attainment of program competencies are also assessed through alumni surveys (begun in 2012 with 2010-11 graduates), employer surveys, and evaluations completed by community partners for the MPH field practice experience.

*g. Assessment of the extent to which this criterion is met and an analysis of the program's strengths, weaknesses and plans relating to this criterion.*

This criterion is met.

#### Strengths

- Accessible and clearly stated competencies for all degree programs.
- Ongoing review of program competencies is a result of collaborative efforts by the Curriculum Committee, Graduate Programs leadership, accreditation workgroup, Division Directors, faculty and students.
- Revised Epidemiology program competencies and program requirements to keep pace with changes in the field.

#### Challenges

- Increasing alumni and employer survey response rates.
- Increasing communication with key stakeholders with respect to program competency review and development.

#### Plans

- Seek new methods to communicate with alumni, employers and site preceptors/community partners regarding program competencies.
- Implement course and program changes based on ongoing feedback from alumni, employers and community partners and faculty/students.
- Collaborate with people in the field and at professional conferences each academic year to maintain competencies that reflect the state-of-the-science public health instruction.

## Criterion 2.0

### Instructional Programs

**2.7. Assessment Procedures.** There shall be procedures for assessing and documenting the extent to which each student has demonstrated achievement of the competencies defined for his or her degree program and area of concentration.

*a. Description of the procedures used for monitoring and evaluating student progress in achieving the expected competencies, including procedures for identifying competency attainment in practice and culminating experiences.*

The educational experience in the Graduate Programs in Public Health provides students with a variety of ways to demonstrate competency attainment.

#### Course Design

Monitoring student progress begins in the classroom. Each course syllabus includes clearly stated learning objectives and requirements a student must meet to successfully complete the course. Course syllabi are reviewed by the Curriculum Committee, which provides assistance to faculty instructors on optimizing the attainment of course learning objectives and ensures the course objectives align with the appropriate program competencies. Faculty course instructors are responsible for evaluating whether students meet course requirements. Assessment measures to evaluate student progress typically include:

- Written Examinations (take-home and in-class)
- Quizzes
- Homework exercises/assignments
- Research/Topic Papers
- Classroom Presentations
- Classroom Participation
- Group Projects

Students' grades on individual course requirements and their final course grade reflect the extent to which they have mastered the course's learning objectives and, in turn, program competencies. A student's successful completion of a course indicates successful progress.

Course syllabi are available in the resource files under syllabi.

#### Student Performance in Courses

Student performance is monitored closely by program administration and faculty advisors. Procedures are in place to identify students who may present academic challenges as early as possible in the semester/course experience, to permit assistance and remediation as necessary. Course grades are used to indicate achievement of course learning objectives. Grade point

averages are based on a range of 0-4 points, with 4.0 indicating a grade of "A", 3.0 indicating a grade of "B", 2.0 indicating a grade of "C". Grades "D" and "F" are failing marks and do not provide any quality points toward the grade point average (0.0). The University grading system uses + and – (plus and minus) in evaluating academic work with numeric equivalents (ex. an A- is 3.7, a B+ is 3.3, a C- is 1.7). All students must maintain an overall grade point average (GPA) of 3.0 or higher during their studies and the University will not grant a graduate degree with a cumulative GPA below 3.0. Students who earn a grade of "D" or "F" in any course do not receive credit for the course. If the course was a degree requirement, they must repeat the course and earn a satisfactory grade.

Course instructors and teaching assistants work closely with students throughout the semester and instructors are asked to notify the appropriate Program Director (public health, biostatistics or epidemiology) of any students demonstrating deficiency in the course before or at the midterm point. Other issues impacting a student's grade such as recurring absences and personal issues can also be addressed with the appropriate program director so advising, counseling and course options can be discussed with the student early in the semester.

The Program Directors review all course grades for students in their Program at the conclusion of each semester and identify students at risk of failing to attain a 3.0 grade point average. Lower grades indicate that a student did not achieve certain learning competencies or that the level of competency was less than satisfactory. Students with isolated below average grades (below a B minus but not failing), who still maintain a cumulative GPA of 3.0, are required to meet with their Program Director to discuss the course, their performance and issues contributing to the below satisfactory grade. The course instructor will be consulted as needed. If a student falls below a cumulative grade point average of 3.0 (on a 4 point scale), a student is placed on academic probation and is required to raise their cumulative GPA to a 3.0 the following semester. Students on academic probation receive formal written notice from their Program Director at the close of the deficient semester and are required to meet with the Director to discuss their course performance. A clear academic plan (including possible remediation) is developed as part of this discussion. The number of courses/credits attempted in future semesters may be limited at the discretion of the Program Director while the student is on academic probation.

Students who accumulate an incomplete grade in any structured course must resolve this status within the timeline designated by the course instructor. Timeframes to remedy an incomplete grade are typically short (one semester or less) to ensure adequate progress toward degree completion. Future registration may be limited until the incomplete mark is resolved with a final letter grade.

Grade requirements are described in the Graduate Programs student handbook provided at orientation (also available online at <http://publichealth.med.miami.edu/graduate/current-students/handbooks>) and general University requirements for Master's and Doctoral students

are detailed in the Graduate Bulletin, available from the Graduate School online at <http://www.miami.edu/index.php/academicbulletin/>.

#### Student Evaluations of Courses and Instructors

Course evaluations are a valuable tool for assessing course design, faculty instruction and student learning. The Graduate Programs in Public Health works with the Testing and Evaluation Services Office to administer online course evaluations at the conclusion of the semester in all structured courses. In 2011, questions were redesigned to provide additional data, including a question that addresses a student's assessment of whether or not the course met the stated learning objectives. The Graduate Programs expects a mean score of 4.0 (on a five point scale) or higher on this question to demonstrate the learning objectives have been met. The question reads: *The stated objectives of the course have been met.* The use of course evaluations to monitor student perception of their attainment of course learning objectives provides the Curriculum Committee and Graduate Programs with valuable feedback for refining the design of courses.

#### Activities Outside the Classroom

In addition to the successful completion of coursework, evaluating student progress toward degree program competency attainment takes place through activities outside the classroom:

##### MPH Program

- Field Experience
- Capstone Project

##### MSPH Program

- Public Health Research Project

##### MS Biostatistics

- Consulting Practicum
- Major Paper or Thesis

##### PhD in Epidemiology

- Comprehensive Examinations
- Dissertation and Oral Defense

##### PhD in Biostatistics

- Consulting Practicum
- Qualifying Examination
- Comprehensive Examination
- Dissertation and Oral Defense

### Field Experience

Capstone Faculty advisors work with the students to select methods and techniques to inform their field experience, and highlight learning objectives and degree program competencies that will be mastered during this experience. During the course of the field experience, the student has access to the Capstone Faculty Advisor to address any issues that may arise. At the conclusion of the field experience, the Capstone Faculty Advisor, via a written report submitted by the student, documents that competencies and objectives were achieved. Additionally, the site preceptor/community partner evaluates the student's performance, including professional skills, overall performance, and demonstration of core competencies. The overall experience is graded on a pass/fail basis.

### Capstone Project

The assigned Capstone Faculty Advisor working with the student during the field experience continues to work with the student during their capstone project. The Capstone Advisor works with the student to apply theory, evidence-based methodology, and public health context to their capstone project. Regular meetings monitor progress and ensure that degree program competencies and objectives are achieved. The final project report is reviewed and assigned a pass/fail grade.

### Public Health Research Project

The student is responsible for selecting faculty readers to form their project committee. The assigned Capstone Faculty Advisor will serve as either the first or second reader to ensure that degree program competencies are adequately addressed in the research. The project committee evaluates the student's written paper and oral presentation. Each provides an opportunity to assess that degree program competencies have been achieved. The committee assigns a final pass/fail grade.

### Consulting Practicum

This requirement is met through a course, BST 510. In this course, students perform a statistical consultant role. Students are evaluated on several projects throughout the semester including an in-class presentation of the formal plan for statistical consultation and a final report, providing an opportunity for the course instructor to evaluate progress toward the degree program competencies.

### Major Paper or Thesis

Students work closely with their assigned capstone advisor and their selected faculty readers. The project committee evaluates the student's written paper and oral presentation. Each provides an opportunity to assess that degree program competencies have been achieved. The committee assigns a final pass/fail grade.

### Qualifying and Comprehensive Examinations

Comprehensive examinations provide a critical method of assessment toward degree program competency attainment prior to entering doctoral candidacy. The comprehensive examination process is led by a faculty committee comprised of faculty instructors who taught the core courses and includes evaluation on both written and oral examinations. The biostatistics doctoral students are also required to complete a qualifying first year exam (at the conclusion of their first year of study) given to ensure students have satisfied any deficiencies identified with respect to program competencies.

### Dissertation and Oral Defense

Doctoral students are required to identify a dissertation committee comprised of a minimum of four faculty members. This committee assesses the scientific rigor of the proposed research project that incorporates a review of critical program competencies. The Committee reviews research project progress, and prepares a final assessment following the oral defense to ensure that the science is sound and that competencies are met. The Committee assigns a pass/fail grade.

*b. Identification of the outcomes that serve as measures by which the program will evaluate student achievement in each program, and presentation of data assessing the program's performance against those measures for each of the last three years. Outcome measures must include degree completion and job placement rates for all degrees included in the unit of accreditation (including bachelor's, master's and doctoral degrees) for each of the last three years. See CEPH Data Templates 2.7.1 and 2.7.2. If degree completion rates in the maximum time period allowed for degree completion are less than the thresholds defined in this criterion's interpretive language, an explanation must be provided. If job placement (including pursuit of additional education), within 12 months following award of the degree, includes fewer than 80% of graduates at any level who can be located, an explanation must be provided.*

### Degree Completion

Two primary outcome measures used by the Graduate Programs to assess students overall achievement in each degree program are degree completion rates and students placement after graduation, whether in employment or future educational settings. Tables 2.7.b.i – iv, below, provide information on degree completion rates for students in the biostatistics, epidemiology and public health programs. Graduation rates are based on time-to-completion requirements established by the University, which are six years for completion of a master's degree and eight years for completion of the doctoral degree. Enrollments for the MS and PhD in Biostatistics program began in 2011, and to date there have not been any graduates in these programs.

Public Health**Table 2.7.b.i: Public Health (MPH and MSPH) Degree Completion Rates**

ENROLLMENT					GRADUATES		
Entering Year	Entering Students	Withdraw or Drop	Current Enrolled	Cohort Graduation Rate % (n)	Graduation Rate by Max Time % (n)	Graduation Rate Beyond Max Time % (n)	Average Time to Complete
2002-03	13	5	0	61.5% (8)	87.5 (7)	12.5 (1)	3.00 years
2003-04	13	1	0	92.3% (12)	83.3 (10)	16.7 (2)	3.96 years
2004-05	7	2	1	57.1% (4)	100.0 (4)	n/a	2.08 years
2005-06	6	1	0	83.3% (5)	100.0 (5)	n/a	2.21 years
2006-07	14	3	0	78.5% (11)	91.0 (10)	9.0 (1)	3.73 years
2007-08	12	4	1	58.3% (7)	100.0 (7)	n/a	2.34 years
2008-09	14	3	1	71.4% (10)	100.0 (10)	n/a	2.62 years
2009-10	14	3	2	64.2% (9)	100.0 (9)	n/a	2.13 years
2010-11*	34	2	8	67.7% (21)	100.0 (21)	n/a	1.83 years
2011-12	62	3	38	TBD	TBD	n/a	TBD
2012-13**	78	2	71	TBD	TBD	n/a	TBD

\*3 students transferred to other public health programs (MD/MPH and PhD in EPI) and are not counted in the graduation rate

\*\*1 student transferred to the public health certificate program and is not counted in the graduation rate

Epidemiology**Table 2.7.b.ii: Doctorate in Epidemiology (PhD) Degree Completion Rates**

ENROLLMENT					GRADUATES		
Entering Year	Entering Students	Withdraw or Drop	Current Enrolled	Cohort Graduation Rate % (n)	Graduation Rate by Max Time % (n)	Graduation Rate Beyond Max Time % (n)	Average Time to Complete
2002-03	4	1	0	75% (3)	66.6 (2)	33.3 (1)	5.19 years
2003-04	8	2	0	75% (6)	66.6 (4)	33.3 (2)	5.05 years
2004-05	4	0	0	100% (4)	100.0 (4)	n/a	3.70 years
2005-06	4	0	0	100% (4)	100.0 (4)	n/a	3.20 years
2006-07	3	0	0	100% (3)	100.0 (3)	n/a	4.52 years
2007-08	4	0	1	75% (3)	100.0 (3)	n/a	4.50 years
2008-09	6	0	0	100.0% (6)	100.0 (6)	n/a	3.55 years



<b>2009-10</b>	4	0	1	75.0% (3)		100.0 (3)	n/a	3.08 years
<b>2010-11</b>	4	1	3	TBD		TBD	n/a	TBD
<b>2011-12*</b>	5	1	3	TBD		TBD	n/a	TBD
<b>2012-13</b>	6	0	6	TBD		TBD	n/a	TBD

\*1 student transferred to the Biostatistics PhD program and will not be counted in the graduation rate

### Biostatistics

<b>Table 2.7.b.iii: Doctorate in Biostatistics (PhD) Degree Completion Rates</b>								
<b>ENROLLMENT</b>					<b>GRADUATES</b>			
<b>Entering Year</b>	<b>Entering Students</b>	<b>Withdraw or Drop</b>	<b>Current Enrolled</b>	<b>Cohort Graduation Rate % (n)</b>	<b>Graduation Rate by Max Time % (n)</b>	<b>Graduation Rate Beyond Max Time % (n)</b>	<b>Average Time to Complete</b>	
<b>2011-12</b>	2	1	1	TBD	TBD	n/a	TBD	
<b>2012-13</b>	6	1	5	TBD	TBD	n/a	TBD	

<b>Table 2.7.b.iv: Biostatistics (MS) Degree Completion Rates</b>								
<b>ENROLLMENT</b>					<b>GRADUATES</b>			
<b>Entering Year</b>	<b>Entering Students</b>	<b>Withdraw or Drop</b>	<b>Current Enrolled</b>	<b>Cohort Graduation Rate % (n)</b>	<b>Graduation Rate by Max Time % (n)</b>	<b>Graduation Rate Beyond Max Time % (n)</b>	<b>Average Time to Complete</b>	
<b>2011-12</b>	2	1	1	TBD	TBD	n/a	TBD	
<b>2012-13</b>	0	0	0	TBD	TBD	n/a	TBD	

The Graduate Programs in Public Health carefully monitors the time to graduation for each degree program offered. Public Health master's students may attend full-time or part-time, with a maximum of six years to complete the degree. The average degree completion time for public health students is 2.75 years. Exceptions to the maximum time to completion rule have been granted by the program for students in the 2002-03, 2003-04 and 2006-07 cohorts. For the doctoral program in epidemiology, the average degree completion time is 4 years. Extensions to the maximum time for completion have been granted for students in the 2002-03 and 2003-04 cohorts. Graduation rates for the epidemiology doctoral program exceed the minimum requirement of 60%.

### Job Placement

Job placement data are collected by Graduate Programs administration at the conclusion of each student's degree experience. Follow-up data on alumni, including employment information, is collected through alumni surveys (beginning with the 2010-11 graduation cohort) and is detailed in Criterion 2.7.e.

Data for the number of graduates per degree program and destination/employment for the last three academic years is provided in Tables 2.7.b.v – x, below. The MS and PhD in Biostatistics are recent and are excluded from reporting in this section.

### Public Health (MPH)

<b>Table 2.7.b.v: Master of Public Health Program (MPH)</b>			
<b>Destination of Graduates by Employment Type</b>	<b>2010 - 11</b>	<b>2011 - 12</b>	<b>2012 - 13</b>
Employed	3	4	7
Continuing education/training (not employed)	2	9	11
Actively seeking employment	0	0	5
Not seeking employment (not employed and not continuing education/training by choice)	0	0	2
Unknown	0	1	1
<b>TOTAL</b>	<b>5</b>	<b>14</b>	<b>26</b>

<b>Table 2.7.b.vi: Employment and Continuing Education (MPH)</b>			
	<b>2010 - 11</b>	<b>2011 - 12</b>	<b>2012 - 13</b>
<b><u>Employment</u></b>			
Academic/Research	2	2	4
Government	1	1	0
Health Care	0	0	3
Other	0	1	0
<b><u>Continuing Education</u></b>			
Medical School or Residency Program	2	8	9
Doctorate Program: Epidemiology	0	1	1
Doctorate Program: Biostatistics	0	0	0
Other Education	0	0	1

**Public Health (MSPH)**

<b>Table 2.7.b.vii: Master of Science in Public Health Program (MSPH)</b>			
<b>Destination of Graduates by Employment Type</b>	<b>2010 - 11</b>	<b>2011 - 12</b>	<b>2012 - 13</b>
Employed	5	3	4
Continuing education/training (not employed)	0	4	3
Actively seeking employment	0	0	1
Not seeking employment (not employed and not continuing education/training by choice)	0	0	0
Unknown	0	0	0
<b>TOTAL</b>	<b>5</b>	<b>7</b>	<b>8</b>

<b>Table 2.7.b.viii: Employment and Continuing Education (MSPH)</b>			
	<b>2010 - 11</b>	<b>2011 - 12</b>	<b>2012 - 13</b>
<b><u>Employment</u></b>			
Academic/Research	4	2	2
Government	0	0	1
Health Care	1	1	1
Other	0	0	0
<b><u>Continuing Education</u></b>			
Medical School or Residency Program	n/a	2	2
Doctorate Program: Epidemiology	n/a	0	1
Doctorate Program: Biostatistics	n/a	1	0
Other Education	n/a	1	0

**Epidemiology (PhD)**

<b>Table 2.7.b.ix: Destination of Graduates by Employment Type (PhD EPI)</b>			
	<b>2010 - 11</b>	<b>2011 - 12</b>	<b>2012 - 13</b>
Employed	4	6	4
Continuing education/training (not employed)	0	2	0
Actively seeking employment	0	0	0
Not seeking employment (not employed and not continuing education/training by choice)	0	0	0
Unknown	0	0	0
<b>TOTAL</b>	<b>4</b>	<b>8</b>	<b>4</b>

<b>Table 2.7.b.x: Employment and Continuing Education (PhD EPI)</b>			
	<b>2010 - 11</b>	<b>2011 - 12</b>	<b>2012 - 13</b>
<b><u>Employment</u></b>			
Academic/Research	2	3	0
Government	0	2	2
Health Care	2	1	1
Other	0	0	1
<b><u>Continuing Education</u></b>			
Medical School or Residency Program	n/a	2	n/a
Other Education	n/a	0	n/a

*c. An explanation of the methods used to collect job placement data and of graduates' response rates to these data collection efforts. The program must list the number of graduates from each degree program and the number of respondents to the graduate survey or other means of collecting employment data.*

Job placement data are collected through the use of student exit surveys, alumni surveys and monitoring and outreach efforts of the Associate Director of Career Services. Exit survey data for 2012-13 is provided below. Alumni survey data for the 2010-11 and 2011-12 graduates is provided in Criterion 2.7.e. Career counseling and career services provided by the Graduate Programs are detailed in Criterion 4.4. The Graduate Programs in Public Health reinstated the use of student exit surveys in Fall 2012. The survey is delivered electronically via email to students by Program staff. Exit survey results are reviewed by the Graduate Programs Director, the appropriate degree Program Directors and shared with the Graduate Executive Policy Committee for further evaluation and feedback.

The exit survey asks students to rate several aspects of their graduate education experience and provide suggestions for improvements to the curriculum and Graduate Programs in general. The survey covers academic advising and career counseling, instructional resources and program administration in additional detail. The response rate for the exit survey for the 2012-13 graduates was 71% (n = 27 of 38 total graduates for 2012-13). This includes 24 public health student responses (20 MPH and 4 MSPH) and three epidemiology doctoral student responses. Overall, students were satisfied with their educational experiences in the Graduate Programs. The overall quality of the graduate programs was rated as satisfactory or above (excellent or good) by 96.2% of respondents. Students were asked to rate how well the degree program prepared them for their next career step and 92.0% of respondents rated satisfactory or above (excellent or good). A summary of this data is provided in Table 2.7.c, below.

Additional exit survey data on advising and career counseling is provide in Criterion 4.4, and a

copy of the complete exit survey is provided in the resource files under surveys.

<b>Table 2.7.c.: Student Exit Survey, 2012 - 13</b>					
<b>Graduate Education Statements</b>	<b>Excellent</b>	<b>Good</b>	<b>Fair</b>	<b>Poor</b>	<b>TOTAL*</b>
Overall quality of your graduate program.	42.4% (11)	53.8% (14)	3.8% (1)	0.0% (0)	<b>n = 26</b>
How well your graduate program prepared you for your next career step.	24.0% (6)	68.0% (17)	4.0% (1)	4.0% (1)	<b>n = 25</b>
Extent to which your education prepared you to apply public health concepts to solve public health problems.	34.6% (9)	65.4% (17)	0.0% (0)	0.0% (0)	<b>n = 26</b>
Overall quality of teaching.	50.0% (13)	38.5% (10)	11.5% (3)	0.0% (0)	<b>n = 26</b>
Overall quality of courses.	34.6% (9)	57.7% (15)	7.7% (2)	0.0% (0)	<b>n = 26</b>
Accessibility of faculty.	69.2% (18)	26.9% (7)	3.8% (1)	0.0% (0)	<b>n = 26</b>
Assistance with completing your culminating experience (field placement/project/thesis/dissertation).	61.5% (16)	34.6% (9)	3.9% (1)	0.0% (0)	<b>n = 26</b>
Overall quality of student life.	38.5% (10)	53.6% (14)	7.7% (2)	0.0% (0)	<b>n = 26</b>
Quality of your fellow students.	50.0% (13)	38.5% (10)	11.5% (3)	0.0% (0)	<b>n = 26</b>

\*one student did not answer this set of questions in the survey

*d. In fields for which there is certification of professional competence and data are available from the certifying agency, data on the performance of the program's graduates on these national examinations for each of the last three years.*

The Graduate Programs in Public Health does not offer any academic or professional degree programs for which there is a requirement for certification to practice. In 2008, the National Board of Public Health Examiners (NBPHE) began offering a certification exam to provide the new credential, Certified in Public Health (CPH). The exam is optional for alumni of schools or programs of public health accredited by the Council on Education for Public Health (CEPH). The previous reporting policy of the NBPHE did not permit effective tracking of exam results for students from individual programs. Tracking by the Graduate Programs indicates only two graduates have completed the exam. Dr. Alberto Caban-Martinez, DO, PhD, MPH, CPH

(Epidemiology graduate) sat for the exam in October 2009 and received passing marks and Ms. Katherine Swidarski (MPH graduate) sat for the exam in October 2012 and received passing marks.

In August 2012, the NBPHE revised their reporting procedures and now all schools and programs will receive detailed scores on their candidates who sit for the exam. The Graduate Programs will continue to monitor the exam process and adoption of this type of certification for employment. Promotional materials for the exam are available to our students in the Graduate Programs office and student lounge.

*e. Data and analysis regarding the ability of the program's graduates to perform competencies in an employment setting, including information from periodic assessments of alumni, employers and other relevant stakeholders. Methods for such assessment may include key informant interviews, surveys, focus groups and documented discussions.*

In a 2012 survey, the Graduate Programs attempted to engage recent alumni to assess their current employment status and their application of program competencies in their place of employment. This process included a second stage of survey activity targeted at employers/supervisors of alumni. Alumni were asked to provide information for contacting their current supervisor (if applicable) and grant permission for the Graduate Programs to survey the supervisor. A total of 43 students graduated from the MPH/MSPH and PhD in Epidemiology programs in 2010 -2012. Of the 43 alumni surveyed, 27 responded, a 62.7% response rate.

#### Alumni Survey

Of the 27 alumni who completed the survey, 85.2% (n = 23) were currently employed. The remaining alumni who are not currently employed (n = 4) are all enrolled in medical school. For those currently employed, alumni were asked to rate how often they use specific public health competencies in their current position.

For application of competencies, the following competency statements were cited as applied most often in the employment setting:

- Use of sound scientific principles and knowledge
- Application of knowledge and skills which exhibit leadership
- Critical evaluation of public health issues
- Application of public health concepts and principles to real world public health problems
- Interpretation of health services and policy

The survey also included two open-ended response questions asking alumni for any suggestions for improving the educational experience and to briefly describe what they consider the most valuable experience in their public health training while enrolled at the University of Miami. The most common suggestions from graduates for improving the educational experience included additional coursework in program evaluation and outcomes research, additional courses in use of statistical software packages and applied statistical analysis, and the expansion of the MPH degree to concentration areas. Alumni also suggested the promotion of additional opportunities for master's level students to engage with faculty on research projects and to gain publication experience. The most valuable experiences cited by alumni during their public health training included relationships and opportunities to work closely with faculty for research experience, receiving a solid foundation in epidemiological principles and basic statistics, serving as a teaching assistant in master's level courses, and the capstone field experience.

#### Supervisor Survey

The supervisor survey included questions to assess whether the employee's epidemiology/public health degree made them a more attractive candidate for the position, how likely the supervisor would be to hire additional graduates from the University of Miami Graduate Programs in Public Health, and a review of how often the alumni/employee uses specific public health competencies in their current position. Of the 27 alumni who completed the survey, 10 provided employer contact information and granted permission for the program to contact their supervisor. Of the 10 supervisors contacted, 4 replied to the survey request.

Although a small sample, all supervisor responses strongly agreed that the epidemiology/public health degree made the alumnus a more attractive candidate for the position. A total of 75% of supervisor responses indicated they would be very likely to hire additional graduates from the University of Miami Graduate Programs in Public Health. For application of competencies, the following competency statements were cited by the supervisor as applied most often by the alumni in the employment setting:

- Application of public health concepts and principles to real world public health problems
- Use of sound scientific principles and knowledge
- Critical evaluation of public health issues
- Application of knowledge and skills which exhibit leadership

Alumni (and supervisor) survey distribution and collection for the 2012-13 graduates in public health and epidemiology will begin in December 2013. Copies of the alumni and employer/supervisors surveys are available in the resource files under surveys.

*f. Assessment of the extent to which this criterion is met and an analysis of the program's strengths, weaknesses and plans relating to this criterion.*

This criterion is met.

#### Strengths

- Multiple vehicles used to assess degree program competencies.
- Self-assessment measure of having attained the course learning objectives included in all structured course evaluations by students at the conclusion of each semester.
- A high percentage of graduates in public health and epidemiology obtain employment in public health practice and academic institutions.

#### Challenges

- Achieving a high response rate on exit surveys and alumni and supervisor surveys.
- To meet alumni recommendations from the 2011 and 2012 alumni survey for additional training in program evaluation, outcomes research, statistical software packages and applied statistical analysis.

#### Plans

- Enhanced monitoring of student/alumni participation in the NPBHE examination.
- Utilize community partner and employment supervisor feedback regarding competency assessment to improve curriculum.
- Modify and increase course offerings in the biostatistics program beginning in academic year 2014.
- Increased training in outcomes research is currently under review by the curriculum committee.
- Promote student participation in newly developed workshops in the use of statistical software packages offered by CTSI and the Center for Computational Science starting in 2014.



**Criterion 2.0****Instructional Programs**

**2.8. Bachelor's Degrees in Public Health.** If the program offers baccalaureate public health degrees, they shall include the following elements:

**Required Coursework in Public Health Core Knowledge:** students must complete courses that provide a basic understanding of the five core public health knowledge areas defined in Criterion 2.1, including one course that focuses on epidemiology. Collectively, this coursework should be at least the equivalent of 12 semester-credit hours.

**Elective Public Health Coursework:** in addition to the required public health core knowledge courses, students must complete additional public health-related courses. Public health-related courses may include those addressing social, economic, quantitative, geographic, educational and other issues that impact the health of populations and health disparities within and across populations.

**Capstone Experience:** students must complete an experience that provided opportunities to apply public health principles outside of a typical classroom setting and builds on public health coursework. This experience should be at least equivalent to three semester-credit hours or sufficient to satisfy the typical capstone requirement for a bachelor's degree at the parent university. The experience may be tailored to students' expected post-baccalaureate goals (e.g., graduate and/or professional school, entry-level employment), and a variety of experiences that meet university requirements may be appropriate. Acceptable capstone experiences might include one or more of the following: internship, service-learning project, senior seminar, portfolio project, research paper or honors thesis.

The required public health core coursework and capstone experience must be taught (in the case of coursework) and supervised (in the case of the capstone experiences) by faculty documented in 4.1a and 4.1b.

The Graduate Programs in Public Health does not offer bachelors degrees in public health. This criterion is not applicable.

The School of Nursing and Health Studies at the University of Miami offers a Bachelor of Science in Public Health degree.



## Criterion 2.0

### Instructional Programs

**2.9. Academic Degrees.** If the program also offers curricula for graduate academic degrees, students pursuing them shall obtain a broad instruction to public health, as well as an understanding about how their discipline-based specialization contributes to achieving the goals of public health.

*a. Identification of all academic degree programs, by degree and area of specialization. The instructional matrix in Criterion 2.1.a may be referenced for this purpose.*

The academic degrees offered by the Graduate Programs in Public Health include the Master of Science in Public Health (MSPH), the Master of Science in Biostatistics (MS), the doctoral programs in Epidemiology and Biostatistics (PhD) and the dual degree (MD/PhD) in Epidemiology. Each of these academic degree programs is referenced in Criterion 2.1.A. The specific academic curriculum for each degree program is available online:

- Master of Science in Public Health (MSPH)  
<http://publichealth.med.miami.edu/graduate/academic-programs/mph>
- Master of Science in Biostatistics (MS)  
<http://publichealth.med.miami.edu/graduate/academic-programs/ms-in-biostatistics>
- Doctoral Degree in Epidemiology (PhD)  
<http://publichealth.med.miami.edu/graduate/academic-programs/phd-in-epidemiology>
- Doctoral Degree in Biostatistics (PhD)  
<http://www.biostat.med.miami.edu/academics/phd-in-biostatistics>
- Dual Degree in Epidemiology (MD/PhD)  
<http://publichealth.med.miami.edu/graduate/academic-programs/dual-degree-programs/md-phd-in-epidemiology>

*b. Identification of the means by which the program assures that students in academic curricula acquire a public health orientation. If this means is common across the program, it need be described only once. If it varies by degree or specialty area, sufficient information must be provided to assess compliance by each.*

All academic degree students (MS, MSPH, PhD) receive a broad public health orientation and perspective, through completion of structured coursework, attendance at departmental lectures and grand rounds, the new student orientation session and program-based student groups (e.g.,

PHSA and Delta Omega).

The Master of Science in Public Health (MSPH) program requires all students to complete the same required courses in the five core areas of public health as the professional public health degree students (MPH) outlined in Criterion 2.3. These courses include EPH 501 Medical Biostatistics I, EPH 521 Fundamentals of Epidemiology, EPH 520 Health Education and Behavior or EPH 614 Introduction to Disease Prevention and Health Promotion, EPH 541 Environmental Health and EPH 631 Public Health Administration or EPH 632 US Health Systems. In addition to these required public health courses, in the area of biostatistics, MSPH students also complete one additional semester of coursework (EPH 502 Medical Biostatistics II). Beginning Fall 2013, all academic and professional public health students (MPH and MSPH) are required to complete EPH 500 Introduction to Public Health as part of their required public health core curriculum. This three-credit introductory public health course provides students with a broad public health orientation, which is followed by a minimum of one course in the five core areas of public health.

The MS and PhD in Biostatistics degree programs require all students to complete both EPH 500 Introduction to Public Health and EPH 521 Fundamentals of Epidemiology during their first year of study. These courses introduce students to the breadth of public health and the basic principles and application of epidemiology. In addition, Biostatistics doctoral students are required to complete four to six courses in a cognate field which can include areas such as epidemiology, environmental health, biology or genomics. Biostatistics students also have the opportunity to pursue elective coursework outside of their program with students from the MPH, MSPH and PhD in Epidemiology degree programs. Students entering the MS or PhD in Biostatistics programs with an earned MPH or equivalent epidemiology and public health coursework are exempt from the EPH 521 Fundamentals of Epidemiology and EPH 500 Introduction to Public Health course requirements.

For those students entering the PhD in Epidemiology degree program with an earned MPH degree or its equivalent, the requirement for coursework that introduces the student to the breadth of public health and to the fundamentals of epidemiology is waived. Students without this background are required to successfully complete EPH 500 Introduction to Public Health and/or EPH 521 Fundamentals of Epidemiology depending on their previous academic record.

Students also obtain a broader public health perspective through attendance at department and division-based presentations that provide an interdisciplinary setting where public health research and practice are discussed. Events include the Department Public Health Sciences Grand Rounds, the Division of Biostatistics Seminar Series and the Biostatistics Collaboration and Consulting Core Roundtable Sessions. These events are open to all students. For epidemiology doctoral students, a minimum Department Grand Rounds attendance requirement (70% attendance) is set for each year of study. For the Biostatistics students (MS and PhD), each student is required to complete a

one-credit seminar course (BST 650 Topics in Biostatistics Research) each year of enrollment which requires a minimum attendance and individual presentation report summaries approved by the biostatistics faculty member leading the seminar course.

The Public Health Student Association (PHSA) is a student organization founded within the Graduate Programs in Public Health and is interdisciplinary in membership. Students from all degree programs within the Graduate Programs in Public Health are encouraged to join and participate in events held throughout each academic year. Events are academic, social and community-service based allowing for exposure to a broad range of public health topics and opportunity to apply public health principles in practice. Additional opportunities for obtaining a broad knowledge of public health are available to students through events hosted by the Delta Omega Honor Society, and journal club sessions sponsored by the epidemiology doctoral students.

*c. Identification of the culminating experience required for each academic degree program. If this is common across the program's academic degree programs, it need be described only once. If it varies by degree or specialty area, sufficient information must be provided to assess compliance by each.*

The structured curriculum and related competencies of each academic degree program prepare students to engage in a rigorous culminating experience that integrates disciplinary knowledge and a public health perspective. The culminating experience is accomplished through a variety of formats across the academic degree programs:

#### MSPH Program

- Public Health Research Project

#### MS Biostatistics

- Consulting Practicum
- Major Paper or Thesis

#### PhD in Epidemiology

- Comprehensive Examinations
- Area of Concentration Examination or Teaching Assistantship
- Dissertation and Oral Defense

#### PhD in Biostatistics

- Consulting Practicum
- Qualifying Examination
- Comprehensive Examination
- Dissertation and Oral Defense

### MSPH Program

For the MSPH students, the culminating experience is successful completion of a public health research project. This experience requires a student to identify a research question of public health significance, obtain, analyze and interpret data appropriate to the research question and present the results of their research in a scholarly written report with oral defense. Prior to initiating research, students must submit a proposal identifying their research topic, appropriate hypotheses and planned methodology. Students are also required to obtain the appropriate Institutional Review Board (IRB) Human Subjects approval before work can begin. The student is responsible for selecting readers, appropriate to the research topic, to form their project committee. The assigned Capstone Faculty Advisor serves as either the first or second reader to ensure that degree program competencies are adequately addressed in the research. Upon completion of the written paper, students are required to give an oral presentation and defense of the public health project to their committee, and interested faculty, staff and students. Students formally register for EPH 699 Public Health Project, for a total of six credits. The EPH 699 Public Health Project Handbook is included in the resource files under culminating experience. Representative public health projects are available for review in the resource files under student work.

### MS in Biostatistics

For the MS in Biostatistics students, the culminating experience includes a consulting practicum and completion of a major paper or thesis. During completion of the structured coursework and after fulfilling specific pre-requisite requirements, biostatistics students register for BST 510 Statistical Consulting, a four-credit practicum. Delivered in a structured course format, students receive an orientation to the process of statistical collaboration and complete several mock consulting assignments with associated exercises. The final portion of the course has each student assigned a University client in need of statistical collaboration. Students are required to meet with their assigned client outside of the class and formulate a preliminary plan for the collaboration that is discussed, evaluated and refined in class sessions by fellow classmates and with limited guidance from the instructor. Students are required to give an in-class presentation of the final formal plan for statistical consultation and complete a final written report on the project.

In addition to the consulting practicum, MS in Biostatistics students are required to complete a major paper. In this experience, students are required to explain a collection of related methods in some branch of statistics and use several of these methods to solve a motivated problem, explaining and contrasting the results. An option for more advanced students is completion of a master's thesis. In this experience, students are required to explain a collection of related methods in some branch of statistics, motivate and develop a non-trivial variation on one of them, elucidate its properties and use it to solve a problem of interest, and compare the new method to some established methods.

For both options, the major paper and the thesis, students work closely with an assigned Capstone Faculty Advisor and a selected second reader. Upon completion of the written document, students are required to give an oral presentation and defense to their committee, which is open to faculty, staff and student attendance. Students formally register for BST 698 (three credits) to complete the major paper or students register for BST 699 (six credits) to complete the thesis. The Biostatistics 698/699 Handbook detailing the major paper and thesis options is included in the resource files under culminating experience.

#### PhD in Epidemiology and Biostatistics

The culminating experiences required of all doctoral students (Epidemiology, MD/PhD and Biostatistics) include the successful completion of written and oral comprehensive examinations and an original dissertation. For the PhD in Biostatistics students, in addition to the comprehensive examination in biostatistics and original dissertation, students are required to complete the statistical consulting practicum (BST 510) outlined above for the MS in Biostatistics degree program and a qualifying examination at the conclusion of their first year study. For the PhD in Epidemiology students, in addition to the comprehensive examinations in epidemiology and biostatistics and an original dissertation, students are required to complete a third written exam in an area of concentration selected by the student or complete a teaching assistantship.

After successful completion of the comprehensive examinations (and other requirements noted above per specific program), doctoral students declare a dissertation title and dissertation committee member list to proceed with admission to candidacy. The doctoral dissertation committee consists of a minimum of four faculty members (three Graduate Faculty members and one outside member) with expertise in the student's area of investigation. Dissertation proposals must be approved by the faculty dissertation committee, and the final product is reviewed during a formal public defense. Dissertations may be a single monograph or a series of three articles linked together with an introduction and conclusion.

Students formally register for EPH or BST 730 and 740 Doctoral Dissertation, for a total of 12 credits.

A list of Epidemiology doctoral dissertation titles for 2010-2013 is included in the resource files under student work. Individual doctoral dissertations may be viewed at the scholarly repository maintained by the Graduate School at <http://scholarlyrepository.miami.edu/etds/>. Dissertation guidelines from the University of Miami Graduate School are provided to all doctoral students at their orientation when entering the program. These guidelines are included in the resource files under culminating experience and available online at [http://www.miami.edu/gs/index.php/graduate\\_school/current\\_students/electronic\\_theses\\_dissertations/](http://www.miami.edu/gs/index.php/graduate_school/current_students/electronic_theses_dissertations/).

*d. Assessment of the extent to which this criterion is met and an analysis of the program's strengths, weaknesses and plans relating to this criterion.*

This criterion is met.

#### Strengths

- The addition of the MS and PhD in Biostatistics to the academic degree programs since the last accreditation self-study report.
- The addition of EPH 500 Introduction to Public Health was created to provide a more structured way to ensure that each student in the MS, MSPH and PhD programs receives a broad orientation on public health.
- Rigorous culminating experience requirements for all academic degrees.

#### Challenge

- Scheduling EPH 500 and EPH 521 each semester during times that do not conflict with other course requirements for epidemiology and biostatistics students.

#### Plans

- Recently remodeled computer lab and classroom space in 2014 mitigates most scheduling conflicts between the epidemiology and biostatistics courses
- Investigate other methods of delivering course content for EPH 500, including online offerings and increasing traditional offerings in 2015.



## Criterion 2.0

### Instructional Programs

**2.10. Doctoral Degrees.** The program may offer doctoral degree programs, if consistent with its mission and resources.

*a. Identification of all doctoral programs offered by the program, by degree and area of specialization. The instructional matrix in Criterion 2.1.a may be referenced for this purpose.*

The doctoral degree programs offered by the Graduate Programs in Public Health include the PhD in Epidemiology and the PhD in Biostatistics. These academic degree programs are referenced in the instructional matrix in Criterion 2.1.A. The specific curriculum for each doctoral degree program is available online:

- Doctoral Degree in Epidemiology (PhD)  
<http://publichealth.med.miami.edu/graduate/academic-programs/phd-in-epidemiology>
- Doctoral Degree in Biostatistics (PhD)  
<http://www.biostat.med.miami.edu/academics/phd-in-biostatistics>

*b. Description of specific support and resources available to doctoral students including traineeships, mentorship opportunities, etc.*

The admission offer provided to doctoral students in both the epidemiology and biostatistics programs includes a full-tuition scholarship for the length of the program, covering 100% of tuition costs.

Students are required to attend full-time and remain in good academic standing to continue receipt of the tuition scholarship. In addition to the scholarship coverage, epidemiology and biostatistics doctoral students are provided with stipend support and partial coverage for the graduate student health insurance plan. The length of time for stipend coverage varies between programs. Funding specifics per program are provided below.

Qualified doctoral students are encouraged to apply for NIH fellowship funding (F30 and F31 applications) and other competitive fellowships when feasible. Funding for professional travel for conference presentations is available to epidemiology and biostatistics students through internal funding programs and a competitive travel award offered by the Office of Graduate and Postdoctoral Studies up to four times per year.

### Epidemiology

Epidemiology students receive a stipend offer with their admission package from the Office of Graduate and Postdoctoral Studies for their first year of study. First year stipend students are not permitted to hold any other paid employment while accepting these stipend funds. The uniform stipend amount for the 2012 – 2013 academic year was \$27,000. During the first year of study, in addition to completing structured coursework, students are required to identify a faculty research mentor. The Epidemiology Program Director works with students to select a faculty mentor working in their research/dissertation area of interest. The identified faculty mentor is also expected to provide stipend support in the second year of study and beyond. Epidemiology students who enter the program while continuing an established research/clinical career have the option of declining the first year stipend and remaining employed. Students electing this option typically work at the University of Miami as senior research associates, faculty members or physicians/clinicians and they do not rely on stipend coverage from a faculty mentor during their studies. Regardless of stipend/employment status throughout the program, all epidemiology students work closely with a faculty mentor identified early in the training to complete a substantial research experience and a doctoral dissertation.

The Epidemiology program has an established funding record for competitive student fellowship awards. Table 2.10.b, in the resource files under awards, details all awards received by doctoral students, 2007– present. A faculty mentor working with the Graduate Programs in Public Health supervises the research plan for each fellowship award.

### Biostatistics

The first entering cohort of Biostatistics students received a stipend offer for the length of the program with their admission package from the Office of Graduate and Postdoctoral Studies. To date, stipend funding has been provided through a mechanism similar to the Epidemiology PhD students combined with support from the Division of Biostatistics. The uniform stipend amount for the 2012 – 2013 academic year was \$27,000. The stipend funding structure for the Biostatistics doctoral program is currently under review as the program continues to evolve.

*c. Data on student progression through each of the program's doctoral programs, to include the total number of students enrolled, number of students completing coursework and the number of students in candidacy for each doctoral program. See CEPH Template 2.10.1.*

For the two doctoral degrees offered by the Graduate Programs in Public Health, data on student progression for the most recent academic year, 2012-2013, are provided in Table 2.10.c below.

<b>Table 2.10.c.: Doctoral Student Data, 2012 – 2013</b>		
	<b>Epidemiology (PhD)</b>	<b>Biostatistics (PhD)</b>
# newly admitted (Fall 2012)	6	6
# currently enrolled (total)	18	7
# completed coursework during 2012 - 2013	3	0
# advanced to candidacy (cumulative) during 2012-2013	4	0
# graduated in 2012-2013	4	0

For the PhD in Epidemiology program, six new students enrolled in Fall 2012, with a total of 18 students enrolled during the 2012-2013 academic year. A total of three students completed all structured coursework requirements during the 2012-2013 academic year and qualified to sit for the comprehensive examinations in epidemiology and biostatistics in Summer 2013. All three students successfully passed the epidemiology and biostatistics exams. Students who successfully pass the comprehensive examinations in Summer 2013 are expected to advance to candidacy the following semester (Fall 2013). A total of 4 students graduated with the PhD in Epidemiology degree in 2012 – 2013.

The PhD in Biostatistics degree program was approved by the University of Miami Graduate Council in 2011 and admitted its first student in Spring 2012. The first full admission cohort entered the program in Fall 2012. Seven students registered for required and elective coursework during the 2012-13 academic year. Six of these students sat for their first year sufficiency exam in June 2013 and all six students received a passing grade, allowing them to advance to their second year of coursework. One biostatistics student from the Fall 2012 admission cohort was dismissed from the program at the conclusion of the academic year and did not sit for the first year sufficiency examination.

*d. Identification of specific coursework, for each degree, that is aimed at doctoral-level education.*

#### Epidemiology

The Epidemiology doctoral program underwent a substantive curriculum review and revision in 2011. Changes to the curriculum were made to provide students with (a) a more structured sequence of courses for epidemiologic and statistical methodology, (b) an optimal course in data management and analysis using standard statistical software packages, and (c) a structured ethics course experience. As a result, the number of course credits required increased (from 36 credits to 51) and the number of dissertation credits required decreased (from 24 credits to 12) to be consistent with program requirements in epidemiology programs across the country. The PhD in Epidemiology degree program currently requires a minimum of 63 credits to earn the degree. This includes 51 credits of didactic coursework including core courses, elective courses

and the recurring seminar requirement, and 12 credits for the doctoral dissertation. The majority of core courses required for the Epidemiology doctoral program are course titles created specifically for the program. Learning objectives for these courses are targeted toward doctoral-level study.

For example, the epidemiology and biostatistics methods course sequences are unique requirements to the PhD in Epidemiology program. Students complete EPH 674 Advanced Epidemiology Methods I and EPH 676 Advanced Epidemiology Methods II during their first year of study. In addition, epidemiology doctoral students also complete EPH 603 Advanced Statistical Methods I and EPH 605 Advanced Statistical Methods II during their first year of study in conjunction with the epidemiology methods sequence. The Epidemiology doctoral program also requires EPH 640 Basic Pathology and EPH 525 Ethics in Public Health. Students in the MPH/MSPH and Biostatistics programs have the option of selecting these courses for elective credit, however they are core requirements only for the PhD in Epidemiology program. Remaining requirements include EPH 651 Survival Analysis in Clinical Trials and BST 525 Statistical Computing.

The course EPH 600 Research Seminar is a one-credit required course for PhD in Epidemiology students. Students must complete a minimum of three semesters, for three credits, in EPH 600 before completing the degree.

A detailed course/credit outline for the PhD in Epidemiology program is provided in this section. Students entering the program without an earned MPH or equivalent degree and/or without the introduction to epidemiology pre-requisite are required to complete EPH 500 Introduction to Public Health and EPH 521 Fundamentals of Epidemiology during their first year of study.

#### PhD in Epidemiology Program

REQUIRED COURSES (minimum 27 credits)

- EPH 674 Advanced Epidemiology Methods I (3cr)
- EPH 676 Advanced Epidemiology Methods II (3cr)
- EPH 640 Basic Pathology (3cr)
- EPH 525 Ethics in Public Health (3cr)
- EPH 600 Research Seminar (1 cr X 3 semesters minimum)
- EPH 603 Advanced Statistical Methods I (3cr)
- EPH 605 Advanced Statistical Methods II (3cr)
- BST 525 Statistical Computing (3cr)
- EPH 651 Survival Analysis in Clinical Trials (3cr)

## ELECTIVE COURSES (24 credits)

- Students must complete a minimum of 9 credits in the following designated epidemiology core electives
  - EPH 610 Public Health Surveillance (3 cr)
  - EPH 611 Cancer Epidemiology (3 cr)
  - EPH 620 Cardiovascular Disease Epidemiology (3cr)
  - EPH 621 Chronic Disease Epidemiology (3)
  - EPH 622 Infectious Disease (3 cr)
  - EPH 623 Diabetes Epidemiology (3 cr)
  - EPH 625 Genetic Epidemiology (3 cr)
  - EPH 626 Environmental Epidemiology (3 cr)
  - EPH 514 Global Outbreak Investigations (3cr)
- Students may select elective coursework based on their area of interest.

## DISSERTATION (12 credits)

- EPH 730 Doctoral Dissertation (*pre-candidacy*)
- EPH 740 Doctoral Dissertation (*post-candidacy*)

Epidemiology students typically complete their required coursework during their first two years of study, then sit for the comprehensive examinations in epidemiology and biostatistics during their second summer in the program. After successful completion of the mandatory comprehensive examinations and the area of concentration exam or teaching assistantship, students advance to candidacy.

Biostatistics

The PhD in Biostatistics degree program was approved by the University of Miami Graduate Council in 2011 and began admission in Spring 2012. The PhD in Biostatistics degree program currently requires a minimum of 70 credits to earn the degree. This includes 58 credits of didactic coursework including core courses, elective course and the recurring seminar requirement, and 12 credits for the doctoral dissertation. As a new degree program, the majority of the core required courses for the Biostatistics doctoral program are course titles created specifically for the program. A small number of course titles were already established within the Mathematics program (MTH). Learning objectives for the required biostatistics courses are targeted toward doctoral-level study.

Biostatistics doctoral students are required to complete MTH 524 Introduction to Probability Theory, MTH 525 Introduction to Mathematical Statistics, MTH 542 Statistical Analysis, and BST 575 Introduction to Generalized Linear Models during their first year of study. The topics covered in these core courses make up the content of the first year qualifying examination that each student is required to complete at the conclusion of their second semester of study. The first year qualifying examination is a written diagnostic exam given to ensure students have

satisfied any deficiencies identified when entering the program that are pre-requisites for future success in the program and to demonstrate adequate progress in the degree program. After successful completion of the first year qualifying examination, students enter their second and third year of study and are required to complete all remaining biostatistics and public health course requirements during this time. Coursework during the second and third year of study includes the advanced coursework for the degree and the consulting course/practicum requirement. The third year of study concludes with written and oral comprehensive examinations. After successful completion of the comprehensive examinations, students may advance to candidacy.

Students are required to complete elective coursework to form a cognate area. The area is selected by the student based on their academic/professional interests. Cognate area coursework focuses in the intended subject area of the doctoral dissertation (e.g., genetics, molecular biology, genetic epidemiology, geographic information systems, quantitative epidemiology) serving as the subject framework for applying and analyzing statistical methods. In addition to elective coursework, biostatistics students are required to complete six credits to fulfill their public health requirement. These courses include EPH 500 Introduction to Public Health and EPH 521 Fundamentals of Epidemiology. Students are encouraged to complete the public health requirement early in their course curriculum.

The course BST 650 Topics in Biostatistics Research was created for the MS and PhD in Biostatistics students. The one-credit course offered each fall and spring semester is required for all biostatistics students. Doctoral students are required to complete a minimum of 6 credits in BST 650 before earning their degree. The BST 650 course consists of a series of research level presentations in contemporary biostatistics research by diverse speakers including faculty in the Division of Biostatistics or outside faculty from other divisions and departments within the Miller School of Medicine and the Coral Gables campus. Students meet weekly with a faculty instructor primarily for organizational and discussion purposes, to ensure that students are selecting appropriate seminar topics and attending regularly.

Students are required to attend a minimum of ten seminars per semester. At the conclusion of each seminar, students must submit a 1-2 page report summarizing the material presented, its relevance to biostatistical practice, possible new applications, examples or results and strengths and weaknesses of the material relative to related methodologies. The goal of the seminar is to increase understanding of the range of contemporary biostatistics research.

A detailed course/credit outline for the Biostatistics program is provided below.

REQUIRED COURSES (40 credits)

- MTH 524 Introduction to Probability Theory (3 cr)
- MTH 525 Introduction to Mathematical Statistics (3 cr)

- MTH 542 Statistical Analysis (3 cr)
- BST 575 Introduction to Generalized Linear Models (3 cr)
- BST 510 Statistical Consulting/Practicum (4 cr)
- BST 630 Longitudinal Data Analysis (3 cr)
- BST 640 Modern Numerical Multivariate Methods (3 cr)
- BST 665 Advanced Clinical Trials (3 cr)
- BST 680 Advanced Statistical Theory (3 cr)
- BST 690 Advanced Survival Analysis (3 cr)
- BST 650 Topics in Biostatistics Research (1 cr X 6 semesters minimum)\*
- BST XXX High Dimensional and Complex Data (3 cr) \*\*

PUBLIC HEALTH REQUIREMENTS (6 credits)

- EPH 521 Fundamentals of Epidemiology (3 cr)
- EPH 500 Introduction to Public Health (3 cr)

ELECTIVE COURSES (12credits)

- Students must complete a minimum of 12 credits in a cognate area
- Students select cognate coursework based on their area of interest

DISSERTATION (12 credits)

- BST 730 Doctoral Dissertation (*pre-candidacy*) (1-12 cr)
- BST 740 Doctoral Dissertation (*post-candidacy*) (1-12 cr)

*\*Students must complete a minimum of 6 semesters in BST 650 before completing the degree. Total credit count in the seminar requirement may vary based on average time in post-candidacy status.*

*\*\* Course is still in development.*

*e. Assessment of the extent to which this criterion is met and an analysis of the program's strengths, weaknesses and plans relating to this criterion.*

This criterion is met.

#### Strengths

- The addition of a new doctoral program in Biostatistics, first admissions in 2012.
- The high quality of our faculty and the student/faculty ratio allow every student the opportunity to work closely with a faculty member engaged in research.
- The Epidemiology program has demonstrated successful track record with NIH fellowship funding, F30 and F31 grants, and competitive awards from other national funding sources.

#### Challenges

- Uncertain financial resources for stipend support to doctoral students beyond their first year of training.
- Limited travel award funding for conference attendance/presentations.

#### Plans

- Encourage more qualified pre-doctoral students to apply for a McKnight scholarship funding.
- Circulate successfully funded F30 and F31 applications to all eligible incoming doctoral students as templates for future submissions.
- Incentivize faculty to include research assistant slots on grant proposals.
- Continue work on the resubmission of the biostatistics and quantitative epidemiology federal training grant application (T32).
- Add additional resources for travel awards in the budget proposal for fiscal year 2015.



## Criterion 2.0

### Instructional Programs

**2.11. Joint Degrees.** If the program offers joint degree programs, the required curriculum for the professional public health degree shall be equivalent to that required for a separate public health degree.

*a. Identification of joint degree programs offered by the program. The instructional matrix in Criterion 2.1.a. may be referenced for this purpose.*

The Graduate Programs in Public Health offers five dual degree programs; four with the MPH degree and one with the PhD in Epidemiology degree. Dual degree programs are the Master of Arts in International Administration/MPH (MAIA/MPH) and the Master of Public Administration/MPH (MPA/MPH) with the College of Arts and Sciences, the Juris Doctorate/MPH (JD/MPH) with the School of Law, and the Medical Doctorate/PhD (MD/PhD in Epidemiology) and the Medical Doctorate/MPH (MD/MPH) with the Miller School of Medicine. Each of these dual degree programs is referenced in the instructional matrix in Criterion 2.1.A. The dual degree curriculum for each degree program is available online:

- MAIA/MPH: Master of Arts in International Administration/MPH  
<http://publichealth.med.miami.edu/graduate/academic-programs/dual-degree-programs/maia-mph-program>
- JD/MPH: Juris Doctorate/MPH <http://publichealth.med.miami.edu/graduate/academic-programs/dual-degree-programs/school-of-law-jd-mph>
- MPA/MPH: Master of Public Administration/MPH  
<http://publichealth.med.miami.edu/graduate/academic-programs/dual-degree-programs/mpa-mph>
- MD/MPH: Medical Doctorate/MPH <http://publichealth.med.miami.edu/graduate/academic-programs/dual-degree-programs/md-mph-dual-degree-program1>
- MD/PhD: Medical Doctorate/PhD in Epidemiology  
<http://publichealth.med.miami.edu/graduate/academic-programs/dual-degree-programs/md-phd-in-epidemiology>

The Graduate Programs in Public Health works in partnership with the Graduate School and other departments/programs to provide an opportunity for interdisciplinary study at the University of Miami. The dual degree programs with the Law School (JD/MPH) and the College of Arts and Sciences (MAIA/MPH and MPA/MPH) require students to apply separately to each degree program and a student must obtain an admission offer to both programs to be considered a dual degree student. Only a single application is needed for the dual degree programs with the Miller School of Medicine (MD/MPH and MD/PhD) and these applications are reviewed at the time of admission to the MD program.

*b. A list and description of how each joint degree program differs from the standard degree program. The program must explain the rationale for any credit-sharing or substitution as well as the process for validating that the joint degree curriculum is equivalent.*

The Graduate Programs in Public Health has clear requirements for public health coursework which students must complete to earn the MPH degree as part of a dual degree program. The University of Miami does not permit students to count the credit received in one course toward the completion of two separate degrees. However, approved dual degree programs allow students to share a limited number of course credits across the two degree programs.

The core public health coursework indicated in Criterion 2.3 is required for all dual degree MPH students. This includes EPH 500 Introduction to Public Health, EPH 501 Medical Biostatistics I, EPH 521 Fundamentals of Epidemiology, EPH 541 Environmental Health, EPH 520 Health Education and Behavior, and EPH 631 Public Health Administration. Depending on the program and student schedule, two core courses have equivalent substitutes; EPH 614 Introduction to Disease Prevention and Health Promotion for EPH 520, and EPH 632 US Health Systems for EPH 631. All dual degree MPH students are required to complete a practice field placement and culminating project. Elective credit requirements and field placement and capstone project registration may vary by dual degree program requirements. A description of how each dual degree program differs from the standard MPH degree is provided below. Credit counts and credit-sharing is summarized in Table 2.11.b, below.

<b>Table 2.11.b: Public Health (MPH) Dual Degree Credit Requirements</b>					
	<b>Dual Degree Program</b>				
<b>Credit Selection</b>	<b>MAIA/MPH</b>	<b>JD/MPH</b>	<b>MPA/MPH</b>	<b>MD/MPH (4 year)</b>	<b>MD/MPH (5 year)</b>
<b>Total Credits</b>	<b>60</b>	<b>115</b>	<b>66</b>	<b>211</b>	<b>211</b>
<b>Public Health Required Core Credits</b>	30	18	27	30	18
<b>Joint Program Required Core Credits</b>	18	82	24	175	175
<b>Elective Credits</b>	6	9	9	0	12
<b>Field Placement and Capstone Project</b>	6	6	6	6	6

**MAIA/MPH: Master of Arts in International Administration/MPH**

The Master of Public Health degree with a second master's degree in International Administration is designed for students who seek an in-depth knowledge of public health with a broader emphasis in globalization and health, international health, international health policy and international development. Students complete a total of 60 credits to earn both degrees.

Students are required to complete the six core MPH courses detailed above (18 credits) and four additional required public health courses titled EPH 512 Global Health, EPH 571 Maternal and Child Health, EPH 641 Research Methods, and EPH 650 Health Economics for Evaluation and Policy for a total of 30 structured course credits. Students complete 18 credits in required core courses for the MAIA program. A total of 6 credits of electives are required from either the MPH or MAIA program. For the field placement, students can complete either IGS 617 Practicum in International Administration for 3 credits or EPH 680 Capstone Field Experience for 3 credits. All dual degree MAIA/MPH students are then required to complete EPH 681 Capstone Project (3 credits).

**JD/MPH: Juris Doctorate/MPH**

The Master of Public Health degree with a dual doctoral degree in law is designed to support and encourage students with an interest in public health studies in the development of interdisciplinary knowledge and skills in preparation for a career in health law, public health policy, or a related field. Students complete a total of 115 credits to earn both degrees.

Students are required to complete the six core MPH courses detailed above and 9 credits of electives from the MPH program for a total of 27 structured course credits. Students complete 82 credits in required core courses for the law program. For the field placement, students complete EPH 680 Capstone Field Experience for 3 credits and EPH 681 Capstone Project for 3 credits.

**MPA/MPH: Master of Public Administration/MPH**

The Master of Public Health degree with a second master's degree in Public Administration is designed for students who seek an in-depth knowledge of public health with training in management and public policy administration. Students complete a total of 66 credits to earn both degrees.

Students are required to complete the six core MPH courses detailed above (18 credits) and three additional public health courses titled EPH 644 Evaluation of Health Programs, EPH 652 Health Policy and EPH 650 Health Economics for Evaluation and Policy for a total of 27 structured course credits. Students complete 24 credits in required core courses for the MPA program. A total of 9 credits of electives are required from either the MPH or MPA program. For the field placement and capstone project, students can complete either POL 656 Public Service Internship for 3 credits or EPH 680 Capstone Field Experience for 3 credits. All dual

degree MPA/MPH students are then required to complete [EPH 681 Capstone Project](#) (3 credits).

#### **Four Year MD/MPH: Medical Doctorate/MPH**

The Graduate Programs in Public Health and the Miller School of Medicine established a four year integrated MD/MPH educational track in 2011. Students complete a total of 211 credits to earn both degrees. Students are required to complete the six core MPH courses detailed above (18 credits). In addition to the six core public health courses, the MD/MPH students complete four additional public health courses specific to their degree track. These courses have included [EPH 512 Global Health](#), [EPH 621 Chronic Disease Epidemiology](#), [EPH 652 Health Policy](#), [EPH 653 Leading Change in Public Health](#), and [EPH 660 Seminar in Contemporary Public Health](#). As the curriculum continues to evolve, changes are made and not all courses are offered to each cohort. For the field placement, students complete [EPH 680 Capstone Field Experience](#) for 3 credits and [EPH 681 Capstone Project](#) for 3 credits. This selection of coursework is required specifically for the MD/MPH program that has no elective coursework options.

The course selection directly links academic work in epidemiology and public health with application in public health practice for clinicians. A total of 36 credits are required for the MPH degree in this track. Students complete 175 credits in required core courses for the medical program.

#### **Five-Year MD/ MPH: Medical Doctorate/MPH**

Students completing this dual degree option take a leave from the MD program for one year to focus on public health coursework. Students complete 36 credits to earn the MPH degree. Students are required to complete the six core MPH courses detailed above (18 credits) and are required to complete a total of 12 credits of electives in public health. For the field placement and capstone project, students complete [EPH 680 Capstone Field Experience](#) for 3 credits and [EPH 681 Capstone Project](#) for 3 credits.

#### **MD/PhD: Medical Doctorate/PhD in Epidemiology**

The Miller School of Medicine dual MD/PhD programs provide a rich training environment that fosters the development of exceptional individuals as both biomedical researchers and clinicians. The Graduate Programs in Public Health participates in this medical school-wide program combining the PhD in Epidemiology degree with the MD degree. Students enter medical school and complete their first two years of MD training. Students then enter the Graduate School to their selected PhD program and complete 3-4 years of graduate training before returning to the MD program to complete the remaining two years of medical school to earn the MD degree. Students enrolled in the PhD in Epidemiology program as dual degree students do not receive a credit-sharing arrangement. Students complete the same Epidemiology curriculum as a standard PhD student. MD/PhD students in Epidemiology are not required to complete [EPH 640 Basic Pathology](#) in the curriculum; an alternate course is selected for this one requirement.

*c. Assessment of the extent to which this criterion is met and an analysis of the program's strengths, weaknesses and plans relating to this criterion.*

This criterion is met.

#### Strengths

- Interdisciplinary opportunities for students to earn dual degrees.
- The four-year MD/MPH degree program is an innovative program, one of a few in the country that integrates medical and public health training and attracts a highly competitive student body.

#### Challenge

- Limited resources dedicated to the marketing and operations of dual degree programs.

#### Plans

- Expand staff and advisor positions dedicated to dual degree program students to promote enrollment. Additional Graduate Programs staff and faculty capstone advisor positions are planned for 2014.
- Assess the feasibility of new dual degree programs in response to student interest and emerging public health practice trends. Discussions are ongoing with the Department Chair and Graduate Programs leadership.
- The School of Nursing and Health Sciences and the Graduate Programs in Public Health have collaborated to develop a BSPH/MPH 4+1 program. The program was approved in January 2014, and is scheduled to begin enrollment in 2015.



**Criterion 2.0****Instructional Programs**

**2.12. Distance Education or Executive Degree Programs.** If the program offers degree programs using formats or methods other than students attending regular on-site course sessions spread out over a standard term, these degree programs must a) be consistent with the mission of the program and within the program's established areas of expertise; b) be guided by clearly articulated student learning outcomes that are rigorously evaluated; c) be subject to the same quality control processes that other degree programs in the university are; and d) provide planned and evaluated learning experiences that take into consideration and are responsive to the characteristics and needs of adult learners. If the program offers distance education or executive degree programs, it must provide needed support for these programs, including administrative, travel, communication, and student services. The program must have an ongoing program to evaluate the academic effectiveness of the format, to assess learning methods and to systematically use this information to stimulate program improvements. The program must have processes in place through which it establishes that the student who registers in a distance education or correspondence education course or degree is the same student who participates in and completes the course or degree and receives the academic credit.

The Graduate Programs in Public Health does not offer distance education or executive degree programs at this time. This criterion is not applicable.

