2.6  Required Competencies. For each degree program and area of specialization within each program identified in the instructional matrix, there shall be clearly stated competencies that guide the development of degree programs. The school must identify competencies for graduate professional public health, other professional and academic degree programs and specializations at all levels (bachelor’s, master’s and doctoral).

Each major within each of the school’s degree programs has established competencies. These competencies are described in this section of the self-study and references to their location in the electronic resource files are provided.

a. Identification of a set of competencies that all graduate professional public health degree students and baccalaureate public health degree students, regardless of concentration, major 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 school (e.g., one set for each BSPH, MPH and DrPH).

Core public health competencies for MPH and BSPH
For those degrees that are classified as graduate professional public health (MPH) and baccalaureate public health (BSPH), there exists a set of core public health competencies. These core public health competencies articulate a standardized set of expectations for all students within a particular degree program, regardless of concentration or major.

Table 2.6.a includes a list of these core competencies for MPH students and Table 2.6.b provides the core competencies for BSPH students. These core competencies are also included within the competency matrices referenced later in this section of the self-study.

Table 2.6.a Core Public Health Competencies for MPH concentrations

By receiving a Master of Public Health (MPH) degree from the School of Public Health-Bloomington, students will be expected to attain the following public health competencies in addition to those specific to their major:

Biostatistics
1. Describe the roles biostatistics serve in the discipline of public health.
2. Apply descriptive and inferential methodologies according to the type of study data and/or study design (in public health) for answering a particular research question.
3. Interpret results of statistical analyses for/in public health studies.

Public Health Administration
1. Identify the main components and issues of the organization, financing and delivery of health services and public health systems.
2. Apply the principles of management to organizational initiatives.

Epidemiology
1. Identify key sources of data for epidemiologic purposes.
2. Apply the basic terminology and definitions of epidemiology.
3. Evaluate the strengths and limitations of epidemiologic reports.

Environmental Health
1. Describe the effects of major environmental and occupational agents on human health and safety.
2. Describe federal and state regulatory programs, guidelines and authorities that control environmental health issues.

Social and Behavioral Sciences
1. Identify basic theories, concepts and models from a range of social and behavioral disciplines that are used in public health research and practice.
2. Identify the social and behavioral determinants that affect health of individuals and populations.

Table 2.6.b Core Public Health Competencies for BSPH majors

By receiving a Bachelor of Science in Public Health (BSPH) degree from the School of Public Health-Bloomington, students will be expected to attain the following public health competencies in addition to those specific to their major:

Biostatistics
1. Apply statistical reasoning and methods in addressing, analyzing and solving problems in public health.
2. Utilize a statistical package program to access, analyze, and interpret public health data.

Public Health Administration
1. Identify the main components and issues of the organization, financing and delivery of health services and public health systems.
2. Identify the principles of management to organizational initiatives.

Epidemiology
2. Describe how methods of epidemiology and surveillance are used to safeguard the population’s health.

Environmental Health Sciences
1. Identify factors, agents, and conditions within the environment that cause adverse health outcomes.
2. Describe environmental control strategies that are commonly applied to prevent or minimize adverse health effects of environmental agents.

Social and Behavioral Sciences
1. Identify behavioral, social, and cultural factors related to public health in diverse communities.

b. Identification of a set of competencies for each concentration, major or specialization (depending on the terminology used by the school) identified in the instructional matrix. The school must identify competencies for all degrees, including graduate public health professional degrees, graduate academic degrees, graduate other professional degrees, as well as baccalaureate public health degrees and other bachelor’s degrees.

The school maintains school-wide core public health competencies for all non-MPH graduate degree programs, both professional and academic, that are consistent across majors, and an additional set of school-wide core epidemiology competencies for all non-MPH graduate degree programs classified as academic. Also maintained are school-wide core public health competencies for all non-BSPH undergraduate degree programs, consistent across majors.

Table 2.6.c provides the core public health competencies for all non-MPH graduate students, Table 2.6.d provides the core epidemiology competencies for all non-MPH graduate academic
degree students, and Table 2.6.e provides the core public health competencies for all non-
BSPH undergraduate students.

In addition to the core competencies for MPH and BSPH students described in Section 2.6.a
and the core competencies for all other students described above, the school maintains a set of
competencies for each undergraduate and graduate major in the school.

Table 2.6.c Core Graduate Public Health Competencies for Other Degrees

By receiving a graduate degree from the School of Public Health-Bloomington, students will be
expected to attain the following public health competencies in addition to those specific to their
major:

1. Summarize the historical and social contexts through which the field of public health has
developed in the United States.
2. Describe the manner in which the basic concepts, theories, and methods of the five core
areas of public health are applied to health-related research, policy, and practice.
3. Distinguish efforts through which organizations and institutions at local, national, and
global levels seek to assure the health of the public.
4. Analyze the manner in which the student's discipline is related to a multidisciplinary
approach to achieving public health goals.

Table 2.6.d Core Graduate Epidemiology Competencies for Other Academic Degrees

Students completing a PhD degree or an MS degree with majors in nutrition science,
biomechanics, ergonomics, exercise physiology, or motor learning/control will also attain the
following competencies specific to epidemiology:

1. Identify key sources of data for epidemiologic purposes.
2. Apply the basic terminology and definitions of epidemiology.
3. Evaluate the strengths and limitations of epidemiologic reports.

Table 2.6.e Core Undergraduate Public Health Competencies for Other Degrees

By receiving an undergraduate degree from the School of Public Health-Bloomington, students
will be expected to attain the following public health competencies in addition to those specific to
their major:

1. Describe the historical and legal foundations of public health in the United States.
2. Demonstrate an understanding of the five core knowledge areas of public health,
including epidemiology, biostatistics, environmental health sciences, health
administration, and the social and behavioral sciences.
3. Explain the manner in which the student's discipline-specific traditions are related to a
multidisciplinary approach to achieving public health goals.

While the core public health competencies for respective degrees have been summarized
above in tables 2.6.a – 2.6.e, the full set of competencies, by major within each degree, are
provided in Electronic Resource files 2.6.a – 2.6.g. These competencies are presented within
each respective competency matrix as requested in section c below.
c. A matrix that identifies the learning experiences (e.g. specific courses or activity within a course, practicum, culminating experience or other degree requirement) by which the competencies defined in Criteria 2.6.1 and 2.6.b are met. If these are common across the school, a single matrix for each degree will suffice. If they vary, sufficient information must be provided to assess compliance by each degree and concentration.

Included in the electronic resource files are competency matrices for all undergraduate and graduate degrees within the school. These matrices are organized as follows:

- Public Health Undergraduate: Electronic Resource 2.6.a
- Other Undergraduate: Electronic Resource 2.6.b
- Public Health Masters (MPH): Electronic Resource 2.6.c
- Other Professional Masters: Electronic Resource 2.6.d
- Other Academic Masters: Electronic Resource 2.6.e
- Public Health Ph.D.: Electronic Resource 2.6.f
- Other Ph.D.: Electronic Resource 2.6.g

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

The competencies for the MPH have been subject to ongoing analysis by the faculty responsible for the administration of majors within that degree and in collaboration with the school's public health community advisory committee. These were revised based on the MPH program’s self-study conducted in 2010 and, given that since that time the school has expanded from one MPH concentration to eight, these competencies have been the subject of significant analysis and discussion over the past four years.

Similar to the MPH, the BSPH has received significant analysis and consideration during this same time. Both faculty and the members of the public health community advisory board feel confident that these competencies reflect current workforce needs and are consistent with the knowledge and skills necessary to respond to today’s public health challenges. During this time, and in response to the evolution of our program, particular attention has been placed upon reviewing and revising the content of the core (and concentration) courses to ensure consistency with the established competencies.

The development of the school-wide core public health and epidemiology competencies for non-public health majors was a direct result of our transition to a school of public health and has had a positive impact on all curricula for these majors at both the undergraduate and graduate level. Simply the addition of the introductory course in public health at both the undergraduate and graduate levels, and the additional inclusion of epidemiology for the school's graduate academic degrees, necessitated a review of the curricula for each major in order to adjust for the addition of public health coursework. Therefore, it is the case that 100% of our non-public health curricula underwent analysis and revision during the 2012-2013 academic year, becoming the academic requirements with the start of the 2013-2014 academic year.

Additionally, for the majority of our non-public health degree programs, the self-study necessitated the development of degree and/or major specific competency matrices given that
many of these programs had not developed such competency-focused elements in the past. This process required in-depth review of the curricula for each major and consideration of the standards and contemporary needs of students in these disciplines. Throughout these revisions and as competency matrices and revised curricula were introduced into review and approval processes, faculty reported that they perceived their respective program’s competencies to be consistent with disciplinary trends and standards. Also, throughout this process faculty in these programs reported that the addition of public health competencies to their programs reflected a progressive approach to ensuring that students in those majors would be developing an understanding of their discipline’s unique contributions to the goals of public health.

Therefore, conducting the self-study had a profound and positive impact on the curricular offerings of the school, resulting in the school being among the first on campus to make public the competencies associated with each of its majors.

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

Competency Development
Our transition to the SPH provided an opportunity for the school to pursue a plan for the assurance of competency-based instruction across the school’s curricula. The development of the competencies occurred through processes that varied slightly by major.

- **Competencies for MPH**: Prior to this self-study, the competencies for the MPH degree (BSCH concentration) had been most recently revised and reviewed during the 2010 CEPH re-accreditation process. As a result, the faculty and public health community advisory board had been engaged in the development of the MPH program’s core competencies and those for the BSCH concentration. With the expansion of the MPH program to include an additional four concentrations in 2011, and then three additional concentrations in 2013, the framework for competency development and assessment was adopted program wide. Competencies for the MPH concentrations were developed by the primary faculty in each concentration, submitted for review to the Public Health Leadership Committee, and subsequently reviewed by the Public Health Community Advisory Board.

- **Competencies for BSPH**: Competencies for the BSPH were developed by the primary faculty in the BSCH concentration in collaboration with course instructors, the Public Health Leadership Committee, and the Public Health Community Advisory Board.

- **“Other” Program Competencies**: Competencies for all majors classified as “other” were developed by the primary faculty situated within the curricular units that have responsibility for the oversight of all academic matters related to a respective major. These competencies from all majors within an academic department were reviewed and revised to capitalize upon opportunities for multidisciplinary enhancement. Subsequent to department-level review and approval, the competencies for each major were submitted to the Undergraduate Studies Committee and Graduate Studies Committee (respectively) for final review, exploration of multidisciplinary enhancement, and approval. Additionally and where applicable, faculty with responsibility for degree programs and majors that have existing external accreditations were considerate of such additional accreditation requirements as competencies for those programs were developed and reviewed.
• **School Wide Core Public Health Competencies:** The school-wide core public health competencies (both undergraduate and graduate) were developed by the Public Health Leadership Committee, in collaboration with faculty representatives on the Undergraduate Studies Committee and Graduate Studies Committee. Drafts of these competencies were subsequently offered for review to faculty within each academic department, and the competencies were subsequently approved by the SPH Academic Council as a result of recommendations for approval by the Undergraduate Studies Committee and Graduate Studies Committee, respectively.

• **School Wide Core Epidemiology Competencies:** The Graduate Studies Committee adopted the competencies for the introductory epidemiology course that had been primarily used to develop competency in this area for MPH students. This course is now required of all SPH doctoral students and also for graduate students in degree programs designated as “academic.”

**Use of Competencies**
Competencies have a particularly important role in the Master of Public Health (MPH) concentrations in the school. In Section 2.7 of this self-study, extensive detail is provided as to the manner in which competencies are used as a framework for assessing the extent to which academic programs are preparing public health students to respond to contemporary public health needs.

The school-wide core public health competencies, particularly those for non-public health majors, play an important role in helping the school articulate to those from diverse and multidisciplinary fields the manner in which they are linked to the broader goals of public health.

The school-wide core public health competencies also serve a valuable role in the school’s efforts toward the education of our own internal workforce. For example, during the 2013 calendar year, the school’s graduate core competencies (Table 2.6.b above) served as the foundation for an internal education series called “Foundations of Public Health.” Throughout our transition to a school of public health we have focused on such activities to ensure that faculty and staff themselves continue to develop an understanding of the core areas of public health and the manner in which their specific disciplines are related to the goals of public health.

The competencies that are unique to each major serve as the foundation for the educational experience of students in the school. Additionally, competencies across the school provide meaningful frameworks for the school’s efforts to assess, and respond to, the continuing education needs of those in diverse segments of the health-focused workforce.

The competencies are used collectively across the school in the following ways:

• Competencies for all degree programs and majors are used by faculty to ensure a clearly articulated and focused framework for all curricular matters.
• Competencies are included on the syllabi of the courses for which they are assigned, and are used by faculty in courses to ensure students have an understanding of expected course outcomes.
• The competencies for all majors are online via the main SPH website, and therefore serve an important role for faculty and staff within the school who assist students with making decisions about the pursuit of specific degrees or majors.
The competencies are used by staff in the Office of Career Services to help students prepare for employment-related activities such as the preparation of vitae and resumes, helping students with letters of application and interviews. Also, the Office of Career Services uses the competencies to help articulate to employers the unique knowledge and skills of graduates from various degree programs when working with organizations, institutions, and corporations that recruit from our school.

Competencies are used by the Office of Global and Community Health Partnerships (OGCHP) as a foundation for workforce needs assessments and the development of continuing education programs.

Availability of Competencies
The SPH makes competencies available via multiple mechanisms, including:

- All competencies are searchable by degree and major on the SPH website. Beginning in spring 2013, the SPH added a new section to the website entitled “what will I learn in this major” (undergraduate and master’s degrees) and “program competencies” (doctoral students) that provides a link to the specific competencies for all students; this information is also available to the public.
- Competencies assigned to specific courses are identified on the syllabi for all such courses.
- Competencies for MPH students are made available in a range of ways, as described earlier in this section, including: materials used for competency assessment (described in Section 2.7), orientation materials, advising materials, course syllabi, field experience materials, culminating experience documents, and in addition to the main SPH website, also via the MPH program website.

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

Several ongoing mechanisms are used by the public health faculty to ensure regular assessment of the consistency between competencies, core and concentration curricula, and the contemporary needs of those in public health practice. These include:

- Annual reviews of MPH competencies and curricula associated with the annual cycle of updates to the university and school graduate bulletin are conducted by the faculty in each MPH concentration and the Public Health Leadership Committee.
- Reviews every two years of BSPH competencies and curricula associated with the biannual cycle of updates to the university and school undergraduate bulletin are conducted by the faculty responsible for the degree program and the Public Health Leadership Committee.
- Twice annually assessments are conducted with members of the public health community to elicit suggestions about the extent to which graduates of the school’s academic programs are able to perform job duties in ways that meet contemporary needs.
- Annual reviews of data collected via preceptor and student evaluations related to the MPH and BSPH field experience.
- Students in all MPH core and required courses complete a pre- and post-assessment of the extent to which they perceive themselves to have attained the competencies assigned to each course and these are made available both individually to the course instructor and in aggregate to the Public Health Leadership Committee for consideration as curricular revisions are discussed.
• Non-public health degree students complete a pre- and post-assessment of the extent to which they perceive themselves to have attained the competencies assigned to the undergraduate introduction to public health course (other bachelors degrees), the graduate introduction to public health course (other graduate degrees), and the epidemiology course (graduate academic degrees).
• Annual elicitation of feedback about current workforce trends and needs from members of the SPH Public Health Community Advisory Board.

Competencies for the non-public health programs were largely developed directly in response to the school’s transition to a school of public health and associated self-study activities. As such, many curricular groups have been exposed to a new process of developing competencies, aligning competencies with coursework and other experiences in the form of a matrix, and considering the manner in which they would be periodically reviewed and revised. Currently, faculty have committed to maintain consistency in the competencies and degree requirements for two years prior to considering changes in order to identify trends across a minimum of two cohorts of students.

During the 2014-2015 academic year (the second year of the new curricular requirements for all of these degrees) the Graduate Studies Committee will provide school-level leadership to develop a more systematic process for conducting a review of the non-public health degree competencies, competency matrices, and corresponding learning experiences. During the 2015-2016 academic year, this review will be conducted and proposed revisions will be reviewed through existing governance processes consistent with the schedule for updating the school and university graduate bulletin. The purpose of planning a systematic process is to ensure that these reviews include the full range of faculty, student, and community constituent perspectives.

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

This criterion is met.

Strengths
The school maintains clearly stated competencies that guide the development of all degree programs within the school, including both public health and other degree programs at both the undergraduate and graduate levels. Accordingly, a competency matrix exists for all majors within each degree program that articulates the specific courses and other learning experiences through which it is expected that students will attain these competencies.

The competency matrices are publicly available via the school's website and are organized by the majors within each degree which faculty and advisors see as a valuable tool for student recruitment. For MPH students, the competencies are provided additionally through orientation materials and field experience materials, and serve as the foundations of the culminating experience.

For non-public health (other) degree programs the competency development process was fully integrated into activities associated with curricular revision for the entire portfolio of degree programs in order to ensure inclusion of required public health coursework. A consistent set of competencies guide the public health components of these other degree programs and serve as an important component of the school's initiatives to ensure that students from diverse health-
related disciplines acquire an understanding of the basic public health sciences and the manner in which those disciplines are related to the broader goals of public health.

A broad range of assessment activities are ongoing for public health degree programs to ensure that competencies are consistent with contemporary needs and trends of the public health workforce.

Weaknesses
Largely as a result of previous CEPH self-studies and accreditation reviews, the MPH program has a solid history of developing and utilizing competencies throughout a student’s academic experience. However, this is not the case for the schools non-public health (other) degree programs and majors, although some of these programs have experiences with competency-based instruction as a result of their own unique accreditation activities (e.g., athletic training, dietetics, and the graduate program in recreation). While some programs have therefore developed systems that ensure an ongoing assessment of competencies associated with a degree or major, the school does not have in place a standardized and consistent process for ensuring the ongoing review and analysis of the competencies for these other-classified programs. Efforts to develop such processes will occur after each program has had at least two full academic years of working from a competency-based framework.

Future Plans
During the 2014-2015 academic year (the second year of the new curricular requirements for all of degree programs designated as “other”) the Graduate Studies Committee will provide school-level leadership to the development of processes for reviewing the non-public health degree competencies and competency matrices. This review will occur during the 2015-2016 academic year, with curricular and competency revisions occurring consistent with the schedule for updating the school and university graduate bulletin. This review process will include the full range of faculty, student, and community constituent perspectives.