
Applied Public Health Informatics Curriculum

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APPLIED PUBLIC HEALTH INFORMATICS CURRICULUM

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About Public Health Informatics Institute

The Public Health Informatics Institute is a program of the Task Force for Global Health, a 501(c)(3) non-profit organization. Our staff is comprised of professionals in the areas of public health, healthcare information systems and communications—all well-versed in the current and emerging issues facing public health. The Institute is known for its expertise as a neutral convener of public health professionals and their stakeholders, transforming health practitioners’ ability to apply information effectively in order to improve health outcomes worldwide.

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Applied Public Health Informatics Curriculum

The Public Health Informatics Institute (the Institute) is offering the Applied Public Health Informatics Curriculum to support academic institutions in creating or enhancing a public health informatics curriculum that is competency-based and provides the knowledge and skills needed in local and state health departments today.

About the Curriculum

In 2008, the Institute received funding from The Robert Wood Johnson Foundation for the development of a competency-based curriculum framework that educational institutions can deliver to public health practitioners to learn about the practice of informatics. After receiving initial documentation from Emory University's Rollins School of Public Health, the Institute convened a workgroup comprised of experts in the field of informatics. Participants worked together to develop a curriculum framework that aligned nationally-recognized public health informatics competencies with course titles, descriptions, learning objectives, and recommended portfolio projects. The curriculum framework also includes suggested resources and instructor notes.

The curriculum framework is to be released to schools of public health, universities, community colleges, and other educational bodies for use as part of a degree or certificate program. Institutions may elect to use the entire curriculum or select modules. The Institute welcomes feedback and suggestions for enhancements.

Target Audience

The ultimate audience for this curriculum framework is staff members in state and local health agencies who manage and influence the determination of information transfer, collection, storage, and integration across departments. Other audiences may vary based on the institution that delivers the curriculum.

Representative Objectives

The following is a representative list of the range of learning objectives presented in the curriculum framework:

- Assess uses and value of different types of data to answer public health questions.
- Apply user-centered design techniques to determine information needs.
- Assess the usability and user satisfaction of an information system or application, and its utility, including effectiveness and efficiency.
- Present public health informatics information to lay and scientific audiences.
- Monitor the use of data security management concepts and principles.

Pre-Requisites

While the Institute recommends that individuals taking these modules have a background in public health, it's expected that each institution delivering the curriculum will determine its own educational pre-requisites.

List of Modules

- I. Introduction to Public Health Informatics
- II. Overview of Data Sources, Standards and Information Systems
- III. Interpersonal and Organizational Communication for the Public Health Informatician
- IV. Project Management and System Lifecycle
- V. Data Management and Enterprise Architecture
- VI. Business Aspects of Public Health Informatics
- VII. Information Security and Privacy; Legal and Ethical Issues
- VIII. Applied Public Health Informatics Evaluation and Research
- IX. Information for Public Health Decision Making
- X. Informatics in Support of Public Health Leadership and Management

APHIC Competency Alignment

| Competencies for Public Health Informaticians | Modules | | | | | | | | | |
|--|---------|----|-----|----|---|----|-----|------|----|---|
| | I | II | III | IV | V | VI | VII | VIII | IX | X |
| 1. Supports development of strategic direction for public health informatics within the enterprise | | | | | | | ✓ | | | ✓ |
| 2. Participates in development of knowledge management tools for the enterprise | | | | | | | | | ✓ | |
| 3. Uses informatics standards | ✓ | ✓ | | | ✓ | | | | | |
| 4. Ensures that knowledge, information, and data needs of a project or program users and stakeholders are met | | ✓ | ✓ | ✓ | | | | | ✓ | |
| 5. Supports information system development, procurement, and implementation that meet public health program needs | | | | ✓ | ✓ | ✓ | | | | |
| 6A. Manages IT operations related to project or program (for public health agencies with internal IT operations) | | | | ✓ | | ✓ | ✓ | | | |
| 6B. Monitors IT operations managed by external organizations | | | | ✓ | | ✓ | | | | |
| 7. Communicates with cross-disciplinary leaders and team members | | | ✓ | | | | | | | |
| 8. Evaluates information systems and applications | | | | | | | | ✓ | | |
| 9. Participates in applied public health informatics research for new insights and innovative solutions to health problems | | | | | | | | ✓ | | |
| 10. Contributes to development of public health information systems that are interoperable with other relevant information systems | | ✓ | | | ✓ | | | | | |
| 11. Supports use of informatics to integrate clinical health, environmental risk, and population health | ✓ | ✓ | | | ✓ | | | | ✓ | |
| 12. Implements solutions that ensure confidentiality, security, and integrity while maximizing availability of information for public health | ✓ | | | | | | ✓ | | | |
| 13. Conducts education and training in public health informatics | ✓ | | ✓ | | | | | | | ✓ |