General Description
Workers in this role design and deliver training programs, using adult learning principles, to employees in clinical and public health settings.

Number of Questions on the Exam:
125 Multiple-Choice Questions

Exam Time:
3 Hours

Domain I: Usability and Human Factors   16%
Competency Statements:

1.   Articulate a systems approach to usability and human factors as it applies to health information technology.
2.   Explain the cognitive consequences of health information technology on clinical performance.
3.   Identify the consequences of suboptimal design in the delivery of healthcare.
4.   Apply methods of cognitive research, sources of usability evidence, and principles of user-centered design to decisions regarding systems evaluation, technology evaluation, and iterative design, given a population of users.
5.   Apply requirements engineering methods to inform design and technology selection.
6.   Demonstrate concept knowledge of cognition and human performance models in their relevance to systems evaluation methods.
7.   Apply concept knowledge of cognitive, physical and organization ergonomics to human factors engineering.
8.   Select the most appropriate usability evaluation method, given particular system, setting, and development phase.
9.   Apply principles of usability and design to critiquing EHR systems and to making recommendations for iterative improvement.
10. Diagnose problems associated with a clinical decision support system.
11. Apply cognitive methods of analysis to medical device testing.
12. Evaluate user interface designs using cognitive methods of analysis, usability testing, and Nielsen's heuristic evaluation method.
13. Diagnose various types of error and create or select potential solutions.
14. Select appropriate technology input methods given different technology uses, user populations and contexts.
15. Describe how information visualization can support and enhance the representation of trends and aggregate data.
16. Describe the role of mobile and ubiquitous computing in healthcare.

Domain II: Training and Instructional Design   14%
Competency Statements:

1.   Plan, design, develop (produce), deliver, and evaluate technology-based instruction according to sound instructional design models and principles.
2.   Describe the training cycle by the Instructional Systems Design method and the phases of the ADDIE model of instruction design given a population of adult learners.
3.   Plan and implement an instructional needs assessment given a specific population of users in a health care setting.

4. Construct a lesson plan using appropriate instructional methods and approaches, given a specific population of learners.

5. Construct an instructional product (simple online tutorial) using the appropriate media based instructional method, such as customized images, customized video (e.g., EHR screen captures).

6. Create a custom PowerPoint presentation using the principles of effective PowerPoint design given a particular training program.

7. Demonstrate effective public speaking skills and proper operation of computer and AV equipment for a multimedia presentation, given a set of user needs.

8. Plan and conduct student assessment and program evaluation given different population contexts.

9. Design a training program in LMS that adhere to the standards and open source initiatives in online learning.

10. Select and implement Web 2.0 technologies as instructional technologies given a specific platform and training program.

Domain III: Health Care and Public Health in the U.S.   14%

Competency Statements:

1. Describe the medical model of healthcare in the U.S.

2. Describe the administrative and functional organization of entities that deliver healthcare in the US, both in the inpatient as well as the outpatient setting.

3. Discuss the role of various healthcare professionals, their education, and certification/licensure requirements.

4. Distinguish between public and private funding for healthcare.

5. Describe health care financing structures, including insurance plans, third-party payers, Medicare, and Medicaid.

6. Describe the organization and structures of HMOs, PPOs, and IPAs.

7. Describe methods of billing and reimbursement in healthcare.

8. Describe elements of coding and charge capture in healthcare.

9. Compare and contrast the function of the Joint Commission, FDA, CDC, and NIH, with an emphasis on EHRs.

10. Discuss legal issues in medicine including HIPAA, confidentiality, medical malpractice, and tort reform.

11. Describe the organization of public health in the US at the federal, state, and local levels, and discuss the role of public health in averting epidemics and bioterrorism.

12. Describe evidence-based medicine, clinical practice guidelines, and quality indicators in medicine. Identify key organizations involved in developing clinical guidelines.

13. Discuss the key issues driving health care reform in the U.S.

Domain IV: The Culture of Health Care   14%

Competency Statements:

1. Describe the major types of clinical personnel involved in health care, including their education and training, certification and licensure, and typical roles in health care.

2. Describe the major types of settings in which health care occurs including ambulatory care, acute and emergency care, hospital based and critical care, and community health and public health settings.

3. Describe the major processes of information gathering, analysis, and documentation used by clinicians to detect, understand, and prevent or treat diseases.

4. Give examples and explain the differences between common forms of care delivery including episodic one-on-one care, multidisciplinary care, interdisciplinary care, care of chronic conditions, population based care, disease management, long-term care, end of life care.

5. Describe the role of community health and public health in managing illness outbreaks, epidemics, and pandemics.

6. Discuss the role of medical ethics and professional values in care delivery including such issues as privacy (including HIPAA), ethical conflicts, and health disparities.

7. Describe common forms of quality measurement, performance improvement, and incentive payment schemes meant to influence care delivery.

Domain V: Information and Computer Science   14%

Competency Statements:

1. Use proper hardware, network, Internet and software computer terminology in written and verbal communications.

2. Write simple computer programs including constructs such as conditional statements, loops, functions, objects, simple data structures, etc.

3. Design a simple database and develop querying statements for it.

4. Describe network computing, its benefits and risks, and identify commonly-used communications hardware and software components.

5. Identify security risks for computing systems and discuss potential solutions.

6. Explain the design and development process of a large system such as an EHR.

Domain VI: Health Information Management Systems   14%

Competency Statements:

1. Describe general functions, purposes and benefits of health information systems, why they are needed, and the benefits they provide in different healthcare and public health settings.

2. Describe the significant developments and federal initiatives that have influenced the evolution and adoption of health information systems.

3. Compare/Contrast different types of health information systems in terms of their ability to support the requirements of a health care enterprise.

4. Understand how electronic health records affect patient safety, quality, efficiency and patient care, productivity, and reporting outcomes.

5. Propose strategies to minimize major barriers to the adoption of electronic health records.

Domain VII: Professionalism/Customer Service in the Health Environment   14%

Competency Statements:
1. Explain key elements of customer service in health IT.
2. Demonstrate appropriate behaviors in simulations of health IT customer service.

3. Demonstrate effective written and oral communication approaches to common communication interactions.

4. Identify core elements of effective communication and techniques to resolve conflicts.
5. Identify ethical and cultural aspects of communication.

100%

Note: All competency statements are tested on the exam, and are equally important.