

General Description

Workers in this role will support on an ongoing basis the technology deployed in clinical and public health settings. Workers in this role maintain systems in clinical and public health settings, including patching and upgrading of software. They also provide one-on-one support, in a traditional “help desk” model, to individual users with questions or problems.

Number of Questions on the Exam:

125 Multiple-Choice Questions

Exam Time:

3 Hours

DOMAIN I: Networking and Health Information Exchange**15%**Competency Statements:

1. Explain the functions of all layers of the ISO OSI models, including how they are interconnected and supported.
2. Recommend components of networking hardware that meet standards and support information exchange.
3. Analyze standards associated with the EHR functional model, the PHR functional model, and the family of profiles associated with specific domain functional requirements.
4. Explain the process and value of EHR certification.
5. Describe data standards required for the interoperable exchange of health care data, including terminology, data elements, document standards, imaging standards, and medical device standards.
6. Describe components of health IT standards (including HL7 and TC215) for health information exchange used by various stakeholders.
7. Examine additional standards related to shared and effective use of data, including clinical decision support.
8. Describe enterprise architecture models, including centralization vs federation and grids, service oriented architectures, and local implementations with respect to systems from single units to organizations, regions (RHIOS and HIEs), states, and nationwide healthcare information systems (NHIN).
9. Incorporate professional and regulatory standards related to privacy, confidentiality, and security when implementing and maintaining networks and health information exchange systems, including NHIN.

DOMAIN II: Special Topics Course on Vendor-Specific Systems**15%**Competency Statements:

1. Assess and compare common commercial EHR systems using KLAS ratings in training and organizational decision-making contexts.
2. Apply CCHIT, meaningful use, Joint Commission and National Patient Safety Goals to decisions about commercial EHR vendor selection, when given typical workplace scenarios.
3. Evaluate key factors (costs of an EHR, including capital, licensing, maintenance and staffing, and stakeholder needs) into workplace decisions for selecting vendor-specific systems.
4. Analyze the functionality of a vendor EHR system, given a set of user needs.
5. Compare database architectures employed by different vendor applications to evaluate how these impact performance and extensibility.
6. Evaluate EHR systems based on vendor strategies for terminology management, knowledge management and data exchange.
7. Compare decision support capabilities and customizability, given different vendor EHRs.

- Evaluate training and go-live strategies of different EHR vendors in terms of impact on cost, workflow, and patient safety.

DOMAIN III: Introduction to Information and Computer Science

14%

Competency Statements:

- Use proper hardware, network, Internet and software computer terminology in written and verbal communications.
- Write simple computer programs including constructs such as conditional statements, loops, functions, objects, simple data structures, etc.
- Design a simple database and develop querying statements for it.
- Describe network computing, its benefits and risks, and identify commonly-used communications hardware and software components.
- Identify security risks for computing systems and discuss potential solutions.
- Explain the design and development process of a large system such as an EHR.

DOMAIN IV: Working with Health IT Systems

14%

Competency Statements:

- Identify common components of an HIT system and types of HIT applications (E-Mar, POE, PACS, ADT, Lab, DSS, Registries, Billing/Coding, etc, and acute care, community health, public health, small provider practices, etc.).
- Describe data flows across HIT systems and implication of standards.
- Identify root causes of HIT-induced error (i.e. usability, workflow interference, system error, etc.) and suggest solutions.
- Assess the strengths and weaknesses of identified solutions to identified HIT problems (to emphasize the reality of “solutions” and illustrate the frequent domino effect/unintended consequences of change of an HIT system).
- Defines usability, describes general usability principles, and relates usability to adoption in relation to HIT.
- Define and differentiate security, confidentiality, and privacy and identify common threats.
- Demonstrate beginning level competency in general HIT system use.

DOMAIN V: Installation and Maintenance of Health IT Systems

14%

Competency Statements:

- Articulate the elements of Health IT systems, including their advantages and disadvantages.
- Justify criteria to be considered when recommending vendors and software.
- Design a comprehensive plan to install a health IT system.
- Design a comprehensive plan to maintain and troubleshoot a health IT system, incorporating system updates and user feedback.
- Implement project plans by installing and configuring hardware and software, interacting with vendors and users as needed.
- Verify plan implementation.

DOMAIN VI: Configuring EHRs

14%

Competency Statements:

- Describe the process of migration to an electronic health record (EHR) from organizational strategy, planning, analysis of EHR options, decision-making techniques, training, and implementation strategies.
- Given a case study of a facility moving from a paper health record to an EHR, discuss the migration path from organizational strategy to implementation, including meaningful use criteria.

3. Discuss the importance and use of clinical decision support systems for clinical and administrative use.
4. Given an EHR system, configure the system to achieve features required for meaningful use, including labs for:
 - a. Building of order sets
 - b. Data entry templates
 - c. Generate quality reports
 - d. Implementation of clinical decision support
5. Understand data infrastructure including data architecture, data sets, data repositories, data standards, data types and data dictionaries.
6. Write an RFI/RFP using stated criteria.
7. Evaluate EHR systems to select an EHR most appropriate to an organization and clinical setting.

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.