Component Description (Each certification track is tailored for the exam and will only include certain components and units and you can find these on your suggested schedules)	Unit Topics
1. Introduction to Healthcare and Public Health in the U.S. This component is a survey of how healthcare and public health are organized and services delivered in the U.S. It covers public policy, relevant organizations and their interrelationships, professional roles, legal and regulatory issues, and payment systems. It also addresses health reform initiatives in the U.S.	1. Introduction and History of Modern Healthcare in the U.S. 2. Delivering Healthcare (Part 1) 3. Delivering Healthcare (Part 2) 4. Financing Healthcare (Part 1) 5. Financing Healthcare (Part 2) 6. Regulating Healthcare 7. Public Health (Part 1) 8. Public Health (Part 2) 9. Healthcare Reform 10. Meaningful Use
2. The Culture of Healthcare For individuals not familiar with healthcare, this component addresses job expectations in healthcare settings. It discusses how care is organized within a practice setting, privacy laws, and professional and ethical issues encountered in the workplace.	1. An overview of the Culture of Healthcare 2. Health Professionals – The People in Healthcare 3. Healthcare Settings – The Places Where Care is Delivered 4. Healthcare Processes and Decision Making 5. Evidence-Based Practice 6. Nursing Care Processes 7. Quality Measurement and Performance 8. Ethics and Professionalism 9. Privacy & Security 10. Sociotechnical Aspects – Clinicians and Technology
3. Terminology in Health Care and Public Health Settings – This component explains specific terminology used by workers in healthcare and public health.	1. Understanding Medical Words 2. Integumentary System 3. Musculoskeletal System 4. Blood, Lymphatic and Immune System 5. Cardiovascular System 6. Digestive System 7. Endocrine System 8. Ears, Nose, Throat, Eye and Vision 9. Nervous System 10. Reproductive System 11. Respiratory System 12. Urinary System 13. Public Health and Healthcare System Technology 14. What is Health Information Management and Technology? 15. Electronic Health Records 16. Standards to Promote Health Information Exchange

4. Introduction to Information and Computer Science This component provides a basic overview of computer architecture; data organization, representation and structure, programming languages, networking and data communication, and basic terminology of computing.	1. Basic Computing Concepts, Including History 2. Internet and the World Wide Web 3. Computer Hardware 4. Computer Software 5. Computer Programming 6. Databases and SQL 7. Networks 8. Security 9. Information Systems 10. Future of Computing
5 – History of Health Information Technology in the U.S. This component traces the development of IT systems in healthcare and public health, beginning with the 1950's and 1960's and culminating in the HITECH act, including meaningful use of EHRs.	1. Evolution of Health IT: The Early Years 2. Evolution of Health IT: The Modern Era 3. Evolution of Health IT: The HITECH Act 4. Evolution of Public Health Informatics 5. Evolution of Nursing Informatics and HIT Tools Used by Nursing 6. History of Electronic Health Records (EHRs) 7. History of Clinical Decision Support Systems 8. History of CPOE and E-Prescribing 9. History of Health Information Exchange 10. History of Privacy and Security Legislation 11. Software Certification and Regulation 12. History of Mobile Computing 13. History of Telemedicine 14. History of Quality Improvement and Patient Safety 15. Payment-Related Issues and the Role of HIT 16. History of Health IT Organizations
6 – Health Management Information Systems Introduction to health IT standards, health-related data structures, software applications; enterprise architecture in healthcare and public health organizations.	1. What is Health Informatics? 2. Health Information Systems Overview 3. Electronic Health Records 4. Computerized Provider Order Entry (CPOE) 5. Clinical Decision Support Systems 6. Patient Monitoring Systems 7. Medical Imaging Systems 8. Consumer Health Informatics 9. Administrative, Billing, and Financial Systems
7 – Working with Health IT Systems Lab component where students will work with simulated systems and data. Participants will play the role of practitioners using these systems to learn what is happening "under the hood."	1. Introduction & Overview: Components of HIT Systems 2. Under the Hood: Functions of HIT Systems 3. Understanding Information Exchange in HIT Systems 4. The Effective HIT System

	5. Fundamentals of Usability in HIT Systems – What Does it Matter?
	6. HIT Facilitated Error – Cause and Effect
	7. Protecting Privacy, Security, and Confidentiality in HIT Systems
	8. HIT System Planning, Acquisition, Installation, & Training: Practices to Support & Pitfalls to Avoid
	9. Potential Issues with Adoption and Installation of an HIT System
	10. HIT and Aspects of Patient-Centered Care
	11. Health IT in the Future
8 – Installation and Maintenance of Health IT Systems Instruction in installation and maintenance of health IT systems, including testing prior to implementation. Introduction to principles underlying system configuration. Hands-on experiences in computer labs and on-site in health organizations.	1. (Elements of a Typical EHR System)
	2. (System Selection – Software and Certification)
	3. (System Selection – Functional and Technical Requirements)
	4. (Structured Systems Analysis and Design)
	5. (Software Development Life Cycle)
	6. (System Security Procedures and Standards)
	7. (System Interfaces and Integration)
	8. (Troubleshooting, Maintenance and Upgrades, and Interaction with Vendors, Developers, and Users)
	9. (Creating Fault Tolerant System, Backups, and Decommissioning)
	10. (Developing a Test Strategy and Test Plan)
	11. (Pilot Testing and Full-Scale Deployment)
9 – Networking and Health Information Exchange In-depth analysis of data mobility including the hardware infrastructure (wires, wireless, and devices supporting them), the ISO stack, standards, internet protocols, federations and grids, the NHIN and other nationwide approaches.	1. (ISO Open Systems Interconnection (OSI))
	2. (Network Media and Hardware Communication Devices)
	3. (National and International Standards Developing Organizations)
	4. (Basic Health Data Standards)
	5. (EHR Functional Model Standards)
	6. (Health Data Interchange Standards)
	7. (Supporting Standards for EHR Applications)
	8. (Enterprise Architecture Models)
	9. (Privacy, Confidentiality, and Security Issues and Standards)
	10. (Health Information Exchange)
10 – Fundamentals of Health Workflow Process Analysis & Redesign Fundamentals of health workflow process analysis and redesign is a necessary component of complete practice automation and includes topics of processes validation and change management.	1. Concepts of Processes and Process Analysis
	2. Process Mapping Theory and Rationale
	3. Interpreting and Creating Process Diagrams
	4. Acquiring Clinical Process Knowledge
	5. Process Analysis
	6. Process Redesign
	7. Facilitating Meetings for Implementation Decisions
	8. Quality Improvement Methods
	9. Leading and Facilitating Change

	10. Process Change Implementation and Evaluation 11. Maintaining and Enhancing the Improvements
11 – Configuring Electronic Health Records Provides a practical experience with a laboratory component (utilizing VistA for Education program) that will address approaches to assessing, selecting, and configuring EHRs to meet the specific needs of customers and end-users.	1. Migration to an Electronic Health Record System 2. Patient Care Clinical Workflow; Multiple Perspectives of Patient Care (VistA Demo) 3. Implementing Clinical Decision Support (VistA Demo) 4. Building Order Sets (VistA Demo) 5. Creating Data Entry Templates (VistA Demo) 6. Health Summary and Clinical Reminder Reports (VistA Demo) 7. Privacy and Security in the U.S. 8. Meaningful Use and Implementation
12 – Quality Improvement Introduces the concepts of health IT and practice workflow redesign as instruments of quality improvement. Addresses patient quality and safety management through electronic systems.	1. Introduction to Quality Improvement and Health Information Technology 2. Principles of Quality and Safety for HIT 3. Introduction to Reliability 4. Reliability and Culture of Safety 5. Decision Support for Quality Improvement 6. Workflow Design 7. HIT Design to Support Teamwork and Communication 8. HIT and Infecting a Patient Safety Culture 9. HIT Implementation Planning for Quality and Safety 10. Measuring Quality 11. Data Quality Improvement 12. Learning from Mistakes: Error Reporting and Analysis and HIT
13 – Public Health Information Technology Provides an overview of specialized public health applications and information exchange issues specific to public health.	1. Overview & Contribution to Public Health Through Electronic Health Record Use 2. Privacy, Confidentiality and Security of Public Health Information 3. Data Standards in Public Health Information Technology 4. Public Health Enabled Electronic Health Records and the Role of Public Health in Health Information Exchange 5. Epidemiological Databases and Registries – Public Health Information Tools 6. Biosurveillance, Situational Awareness and Disaster Response 7. Public Health Reporting, Alerts and Decision Support 8. The Potential of Public Health IT for Health Promotion and Chronic Disease Prevention 9. Quality Reporting 10. Encouraging Adoption/Use of Population Health Functions for EHRs and Consumer Functions for PHRs.
14 – Special Topics Course on Vendor-Specific Systems	1. Common Commercial Electronic Health (EHR) Systems Used in Ambulatory

Provides an overview of the most popular vendor systems highlighting the features of each as they would relate to practical deployments, and noting differences between the systems.	and Inpatient Care Settings 2. Certification of Commercial Electronic Health Records (EHRs) 3. How do Organizations select an EHR? Lessons From the Front Lines 4. Electronic Health Record (EHR) Functionality 5. System and Database Architectures Used in Commercial EHRs 6. Vendor Strategies for Terminology, Knowledge Management, and Data Exchange 7. Assessing Decision Support Capabilities of Commercial EHRs
15 – Usability and Human Factors Discussion of rapid prototyping, user-centered design and evaluation, usability; understanding effects of new technology and workflow on downstream processes; facilitation of a unit-wide focus group or simulation.	1. People and Technology, Studies of Technology 2. Requirements Engineering 3. Cognition and Human Performance 4. Human Factors and Healthcare 5. Usability Evaluation Methods 6. Electronic Health Records and Usability 7. Clinical Decision Support and Usability 8. Approaches to Design 9. Ubiquitous Computing 10. Designing for Safety 11. Input and Selection 12. Information Visualization
16 – Professionalism/Customer Service in the Health Environment This component develops the skills necessary to communicate effectively across the full range of roles that will be encountered in healthcare and public health settings.	1. Customer Service in Healthcare IT 2. Professional Behavior in the Healthcare Environment 3. Overview of Communication Relevant to Health IT 4. Key Elements of Effective Communication 5. Regulatory Issues: HIPAA and Standard Precautions 6. Team and Small Group Communication (All materials for this unit are the same as those for Component 18/Unit 7) 7. Conflict Resolution (All materials for this unit are the same as those for Component 18/Unit 8) 8. Ethical and Cultural Issues Related to Communication and Customer Service 9. Personal Communications and Professionalism
17 – Working in Teams An experimental course that helps trainees become "team players" by understanding their roles, the importance of communication, and group cohesion.	1. Health IT Teams: Examples and Characteristics 2. Forming and Developing a Team for HIT 3. Initial Tools for Teaming: Ground Rules & Action Plans for HIT Team 4. Team Strategies and Tools to Enhance Performance and Patient Safety: TeamSTEPPS 5. Leveraging Integration Techniques: Power of HIT Team Dynamics 6. Articulating Feedback and Feedforward: Tracking Success and Change

	7. Leadership: All members as Leaders – Leaderful Teams
	8. Sharing Resources and Information: Tools to Optimize Performance of HIT Teams
	9. Positioning for High Performance Teaming: Challenges and Opportunities in the HIT Environment
	10. Barriers to Success: Reading Early Warning Signs of HIT Team Failure
	11. Life Cycle of HIT Teams: Reforming and Repositioning Techniques
18 – Planning, Management and Leadership for Health IT This component targets those preparing for leadership roles, principles of leadership and effective management of teams. Emphasis on leadership modes and styles best suited to IT deployment.	1. Introduction to Leadership 2. The Management and Leadership Distinction 3. Key Concepts Associated with Leadership 4. Effective and Ineffective Leaders 5. Overview of the IT Strategic Planning Process 6. Achieving External Alignment 7. Team and Small Group Communication (All materials for this unit are the same as those for Component 16/Unit 6) 8. Conflict Resolution (All materials for this unit are the same as those for Component 16/Unit 7) 9. Purchasing and Contracting 10. Change Management
19 – Introduction to Project Management An introduction and understanding of project management tools and techniques that results in the ability to create and follow a project management plan.	1. Overview of Health IT Projects 2. Project Life Cycles 3. Project Selection and Initiation 4. Project Planning Overview 5. Managing Project Scope 6. Managing Project Time, Cost, and Procurements 7. Managing Project Risk 8. Team Management and Communications 9. Project Monitoring and Control 10. Quality Management 11. Project Closure and Transition
20 – Training and Instructional Design Overview of learning management systems, instructional design software tools, teaching techniques and strategies, evaluation of learner competencies, maintenance of training records, and measurement of training program effectiveness.	1. Introduction to Training and Adult Learning 2. Needs Analysis 3. Creating a Lesson Plan 4. Selecting and Working with Media 5. Building & Delivering Effective PowerPoint Presentation 6. Assessments 7. Learning Management Systems 8. Web 2.0 and Social Networking Tools