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Informatics Nursing (NI-BC™) Board Certification Examination

Test Content Outline

Effective Date: April 19, 2027

This test content outline lists the knowledge and skills identified as being important for the role, as determined by the most recent role delineation study. The number of questions in each of the major categories of the scored portion of the examination are shown below.
Note: The examples in parentheses are not all-inclusive and do not indicate importance but are simply to provide clarification and guidance for studying.

There are **150 questions** on the examination. Of these, **125 are scored questions** and **25 are pretest questions** that are not scored. Performance of pretest questions is evaluated and used to determine if they will be used in the scored portion of the examination. The pretest questions cannot be distinguished from those that will be scored, so it is important for a candidate to answer all questions. A candidate's score, however, is based solely on the 125 scored questions. Performance on pretest questions does not affect a candidate's score.

CONTENT DOMAIN	NUMBER OF QUESTIONS	PERCENTAGE
I. Foundations of Practice	52	42%
II. System Design Lifecycle	57	46%
III. Data Management and Healthcare Technology	16	13%
TOTAL	**125**	**101%***

Total does not come to 100 because of rounding

52 questions; 42%

I. Foundations of Practice

A. Professional Practice

Knowledge

1. Nursing informatics scope and standards of practice
2. General management fundamentals (eg, leadership and management principles, strategic planning, mentoring, budgeting)
3. Policy promotion and public advocacy for harm reduction (eg, promoting informatics as a tool for community-level decision-making and identifying disparities in resource distribution, population [eg, geographical] health and risk stratification)

Skill

1. Applying evidence-based and ethical practice of informatics solutions (eg, literature reviews and evaluations, clinical practice guidelines, clinical protocols, emerging trends)
2. Self-development strategies for informatics nurses (eg, performance goal setting, continuing education, competency development, evaluation methodologies, informatics professional organizations, promoting informatics)

B. Methodologies and Theories

Knowledge

1. Foundations of nursing informatics (eg, computer science, information science, nursing science)
2. Concepts or theories that support practice (eg, Data Information Knowledge Wisdom [DIKW], organizational behavior, communication systems, safety cultures and processes, systems theory, information processing systems)

Skill

1. Applying common change management, governance approval and process improvement techniques (eg, Institute for Healthcare Improvement [IHI], Total Quality Management [TQM], High Reliability Organizations [HRO])

C. Rules, Regulations, and Requirements

Knowledge

1. Regulatory, reimbursement, and accreditation requirements (eg, clinical processes involving revenue cycles, The Joint Commission, Centers for Medicare & Medicaid Services [CMS], Health Information Technology for Economic and Clinical Health [HITECH] Act)
2. Legal issues (eg, malpractice, scope of practice, proprietary data misuse, copyright permissions)
3. Security, privacy, and confidentiality regulations, laws, and principles (eg, Health Insurance Portability and Accountability Act [HIPAA], security threat assessment and mitigation, Relief, and Economic Security [CARES] Act, 21st Century Cures Act)

Skill

1. Developing and reviewing policies and procedures for relevance to professional practice regulations

D. Interprofessional Collaboration

Knowledge

1. Professional communication strategies and techniques (eg, change communication, systems-based communication, communication timing)

Skill

1. Selecting appropriate modes of communication for the situation (eg, face-to-face, written, verbal, electronic, body language)
2. Applying team building principles and skills (eg, promoting accountability, assigning roles, coordinating workgroups and interprofessional teams, managing and resolving conflicts)

57 questions; 46%

II. System Design Lifecycle

A. Planning and Analysis

Knowledge

1. System planning (eg, needs assessment, impact analysis, gap analysis, feasibility studies, vendor analysis, and hardware device strategy)
2. Project management fundamentals

Skill

1. Analyzing interactions between clinicians, workflows, and information systems through the use of various data/process diagramming techniques (eg, decision trees, swimlane diagrams, flowcharts, database diagrams)

B. Designing and Building

Knowledge

1. Clinical content building techniques (eg, dashboards, templates, flowcharts, order sets)

Skill

1. Providing report criteria for collection of data and information
2. Designing systems to support workflows (eg, clinical decision support [CDS] logic, developing workflow maps)

C. Testing, Training, and Implementation

Knowledge

1. System implementation techniques and risks (eg, conversion, migration from legacy systems, upgrades, optimizations, backout plans)

Skill

1. Utilizing testing fundamentals (eg, functional testing [unit, integration, regression], non-functional testing [user acceptance], creating scripts and evaluating test scenarios)
2. Utilizing training fundamentals (eg, training needs analysis, adult learning methodologies, training modalities, evaluation techniques)
3. Planning education and training (eg, setting objectives, designing materials)
4. Applying simulation technology strategies to clinical scenarios for end-user training and adoption (eg, pump integration, AI assisted tools)

D. Monitoring, Maintaining, Supporting, and Evaluating

Skill

1. Evaluating user experience, adoption, and satisfaction (eg, usability heuristics, ergonomics)
2. Supporting end-users and leadership (eg, optimization, user manuals, help desk tickets, change governance processes and procedures)
3. Managing downtime for routine/scheduled upgrades, maintenance, and disaster and emergency recovery
4. Troubleshooting clinical devices, equipment, hardware and software issues for patients and end-users (eg, single sign on [SSO], smart devices, barcode scanners)

16 questions; 13%

III. Data Management and Healthcare Technology

A. Data Information Knowledge and Wisdom

Knowledge

1. Understanding the relationships between standardized nomenclatures and technical standards to support interoperability (eg, Consolidated Clinical Document Architecture [C-CDA], Health Level Seven [HL7]/Fast Healthcare Interoperability Resources [FHIR], Nursing Minimum Data Set [NMDS], Clinical Care Classification [CCC] system, Perioperative Nursing Data Set [PNDS], Logical Observation Identifiers Names and Codes [LOINC] , Systematized Nomenclature of Medicine [SNOMED])
2. Concepts and principles of data (eg, database types, warehousing) and it's use in the daily operations of healthcare organizations (eg, dashboards, metrics, predictive modeling)
3. Healthcare technology trends (eg, mobile devices, wearables, telehealth, Internet of Things [IoT], home medical devices, analytics, real-time locating system [RTLS], natural language processing [NLP], AI, genomics, Virtual Reality [VR], Virtual Nursing)

Skill

1. Validating data integrity post migrations, backloading, and/or downtime recovery
2. Utilizing data visualization techniques to support decision making for operations and patient safety (eg, root cause analysis [RCA], failure mode effects analysis [FMEA], dashboards)