

# **USING QSEN KSA'S TO BUILD AN UNDERGRADUATE ONLINE NURSING INFORMATICS COURSE**

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# Impetus for Change

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- Addition of a new undergraduate course: Nursing Informatics
- Student feedback
  - General education course: Basic Computing
- Teaching computer content within the context of nursing

# Course Structure

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- Online Delivery
  - 16 weeks using BlackBoard LMS
  - All PP lectures have voice-overs using Adobe Presenter
  - Course developed using Quality Matters™
  - Students required to post on 2 separate days and respond to at least two classmates each week.
- Four Modules
  - Background and Foundation for Nursing Informatics
  - Nursing Informatics Competencies
  - Applications and Roles for Nursing Informatics
  - Current Issues in Nursing Informatics

# Knowledge

QSEN Competency	Teaching/Learning Strategy
Explain why information and technology skills are essential for safe patient care	Innovations Paper Blog #1
Identify essential information that must be available in a common database to support patient care	Discussion #3 Discussion #9
Contrast benefits and limitations of different communication technologies and their impact on safety and quality	Discussion #1 (dissemination) Discussion #4 (competencies) Discussion #10 (competencies)
Describe examples of how technology and information management are related to the quality and safety of patient care	Innovations Paper
Recognize the time, effort, and skill required for computers, databases and other technologies to become reliable and effective tools for patient care	Discussion #3 Roles Paper Word, Excel, PP Tutorials Discussion #6

# Skills

QSEN Competency	Teaching/Learning Strategy
Seek education about how information is managed in care settings before providing care	Discussion #1 and #2
Apply technology and information management tools to support safe processes of care	Innovations Paper Discussion #9
Navigate the electronic health record	<i>Clinical Courses</i>
Document and plan patient care in an electronic health record	<i>Clinical Courses</i> Discussion #1
Employ communication technologies to coordinate care for patients	Discussion #1 Discussion #4 Discussion #10
Respond appropriately to clinical decision-making supports and alerts	Blog #4
Use information management tools to monitor outcomes of care processes	Roles Paper Innovation Paper Discussion #6

# Attitude

QSEN Competency	Teaching/Learning Strategy
Appreciate the necessity for all health professionals to seek lifelong, continuous learning of information technology skills	Blog #2 Word, PP, Excel Tutorials
Value technologies that support clinical decision-making, error prevention, and care coordination	Innovations Paper Blog #4
Protect confidentiality of protected health information in electronic health records	Discussion #8 Health Privacy Awareness Course
Value nurses' involvement in design, selection, implementation, and evaluation of information technologies to support patient care	Roles Paper Discussion #7
Appreciate the necessity for all health professionals to seek lifelong, continuous learning of information technology skills	Blog #2 Word, PP, Excel Tutorials
Value technologies that support clinical decision-making, error prevention, and care coordination	Innovations Paper Blog #4

# Activity: Website Evaluation

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## Assignments:

- Website evaluation using Health on the Net (HON) Code standards
- Complete a SMOG (simple measure of gobbeldygook) analysis
- Post findings to the discussion forum
  - Intended audience
  - Findings from HON standards
  - SMOG level and appropriateness for intended audience

# Website Evaluation Rubric

	Excellent	Needs Improvement	Unacceptable
Critically evaluates the website using the HON Code guidelines	Provides examples from the website and thoroughly discusses the principles in relation to the website. 10	Some examples given, not all principles are addressed in depth 5	Cursory overview of the website. Critical information is missing or lacking. 0
SMOG readability	Provides findings from the readability calculator finding 2		Does not address the readability 0
Benefits and limitations	Critically examines the website providing benefits and limitations 8	Discusses benefits and limitations of the website superficially 4	Does not address benefits and limitations 0
Proposed changes	Proposes changes based on findings from the HON Code with justifications. 5	Proposes changes without justifying the rationale 2	Does not address proposed changes 0



# Assignment: NI Roles

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- Roles paper (two options)
  - Interview a nurse working in an informatics role
  - Compare and contrast three position descriptions
    - Both based on the ANA SoP for a Nurse Informaticist
  - Requirements:
    - Create a PP presentation on the findings
    - Submit a 2-3 paragraph synthesis of findings to the discussion forum

# Assignment: NI Roles

ANA S&S	Position 1	Position 2	Position 3
Educational Requirements			
Certification Required?			
Project Management			
Clinical Information Management			
Quality and Benchmarking			
Telehealth			
Research			
Education of staff			
EHR or EMR?			

# NI Roles Rubric

	Unacceptable	Needs Improvement	Excellent
Identifies the skills/competencies for the three positions	Cursory responses that does not reflect deeper meaning. 0	Some depth in responses. Lacks exploration of topic. Selects position descriptions that have minimal information. 5	Provides detail about how the position description includes the characteristics. Describes how the different positions meet the standards of NI practice 10
Power Point presentation	Cursory responses that do not reflect thoughtful analysis. 0	Provides some information. Describes with thoughtful analysis the comparison of the positions. Details what should be included in a position description for a nurse informaticist. 5	Provides a Nursing Informatics position description that includes core areas and thoroughly/clearly explains responsibilities for a nurse informaticist. Clear and analytical comparison of positions. 10
Posts synopsis to discussion thread	Cursory synopsis that lacks reflection and insight. 0	Synopsis provides information that may not reflect thoughts and insights. 4	Synopsis provides a clear overview of the positions with reflection, insights and thoughtful analysis 8
Assignment submitted to appropriate areas	0	0	Posts to the discussion thread and to the assignment dropbox 2

# Activity: Word, Excel, PP Tutorials

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Starts with basic skills

- Tutorials on Word, Excel, and PowerPoint
  - Created in collaboration with IT
  - All relate to nursing content and use of programs
- Library tutorial on search strategies
  - Created by nursing librarian

# Assignment: Innovations Paper

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- Innovations Paper
  - Perform a search (web, library database, etc.) to identify new technology for health care delivery. The new technology must impact quality patient care in terms of delivery or outcomes.
  - Formal APA paper
  - Template provided

# Innovations Paper

- **Background**

- Describe the new technology.
  - What is it? Describe the technology.
  - What does it do? How does it work?

- **Quality**

- What is the impetus for the new innovation? Why is it important?
  - Relate the new technology to patient care quality and safety. How does it support quality and safety? This is the selling point for your innovation.
    - What quality outcomes does it affect?
    - How will effectiveness be measured?
  - Provide reference data and/or statistics that demonstrate the need. For example, a new glucometer allows the nurse to see trends and downloads wirelessly into the computer charting. Perform a literature search on error rates and glucometers or check the manufacturer's fact sheet for research that supports the need for the new glucometer. This allows an understanding of the broader need for changes to support the new technology.

# Innovations Paper

- **Stakeholders**

- Who will be impacted by the new technology? Identify those that would need to accept the new technology.
  - Who are the stakeholders? For example, the innovation might impact the following areas:
    - Patients
    - Nurses
    - Physicians
    - Lab
    - Information Technology
  - Provide a rationale as to why the stakeholders were selected. For example, you might include IT as a stakeholder for the glucometer example above. The rationale is that they need to be included from the beginning to ensure the functionality of the glucometers, if they work with current systems, and if other resources are necessary to make them function as intended. Not including them could have a major impact, especially if the technology could not 'speak' with current systems.

# Innovations Paper

- **Organizational Impacts**

- What are the impacts on education, administration, direct nursing care, and patient outcomes?
  - What education would be necessary to implement the new technology? Who would perform the education?
  - What impact would administration have on the new technology? Using the glucometer example, the Directors of Laboratory Services, Pharmacy, Informatics, Information Technology, and Unit Directors would need to be on board with the technology. Explain how each perspective affects acceptance of the technology.
  - How does the technology affect nursing care? What impact does it have on nursing?
  - What patient outcomes are impacted by the new technology? In the glucometer example, it may be rapid detection of trends, quicker response with interventions, or assist the patient in developing an understanding of the changes in their glucose levels.

- **Conclusion** that summarizes the main points.



# Innovations Paper Rubric

	Unacceptable	Needs Improvement	Excellent
New Technology Background	Cursory overview of technology 0	Provides some detail, missing explanation of what it does or how it works 3	Describes the technology fully 5
Quality Impact	Does not address the impact on quality. Does not provide statistics or reference data. 0	Loosely relates the technology to patient care quality and safety. Unclear reference data or supporting statistics. 3	Relates the new technology to patient care quality and safety. Fully describes the impact with reference data or statistics. 5
Stakeholder Identification	Identifies some stakeholders but is missing key people. Rationales are not provided. 0	Identifies most of the stakeholders and/or rationale does not support their inclusion. 3	Clearly identifies all stakeholders and provides rationale for their inclusion. 5
Organizational Impacts	Does not clearly discuss the impact on education, administration, direct nursing care, and patient outcomes. Does not demonstrate critical thinking regarding the impact. 0	Does not clearly discuss the impact on education, administration, direct nursing care, and patient outcomes or is missing critical thinking regarding the impact. 3	Clearly discusses impacts on education, administration, direct nursing care, and patient outcomes, demonstrating critical thinking regarding the impact. 5
Conclusion	Does not tie in major points of the paper 0	Ties in most major points of the paper. 3	Ties together major points of the paper clearly. 5
References in APA format	More than 8 APA errors in the reference list 0	4-7 APA errors in references 1	0-3 APA errors in references 2
5 peer reviewed articles included	Less than 3 peer-reviewed articles 0	4 Peer reviewed articles 3	5 Peer reviewed articles 5
APA format, grammar, and spelling		1-2	3

