

# **Nursing 453 Information Management and Healthcare Technology Course Syllabus**

**Spring 2017**

CPS 334B

Office Hours: Weds 1pm-2pm or by appt

715-346-4828

Course content used with previous permission from Amy Coenen Ph.D., RN FAAN and Kay Jansen, DNP,RN. University of Wisconsin-Milwaukee

## **Course Description**

This 3-credit course focuses on how to utilize computer and information/decision science to support quality and safety in health care. The course explores the issues in informatics and examines nursing's role in healthcare technology.

## **Student Learning Outcomes**

Upon successful completion of this course, the student should be able to:

1. Delineate the role of the nurse in healthcare informatics.
2. Describe how to manage data, information, knowledge, and technology to enhance and measure clinical practice, education, administration, and research.
3. Discuss healthcare informatics relationship to ethical, legal, political social, cultural, economic, and management issues that impact the delivery of quality and cost-effective healthcare.
4. Demonstrate mastery of select and current technology skills.
5. Evaluate healthcare forces, trends, and professional standards impacting healthcare informatics.

## **Course Materials**

### **Required text**

McGonigle, D., & Mastrian, K.G. (2015). *Nursing informatics and the foundation of knowledge* (3<sup>rd</sup> ed.). Burlington, MA: Jones & Bartlett Learning. ISBN# 978-1-284-04351-8

### **Recommended Text:**

American Psychological Association (2010). *Publication manual of the American Psychological Association* (6th ed.). Washington, DC: American Psychological Association.

## Course Organization

The course is organized into 7 modules; each module lasts 2 weeks:

Module 1: Introduction to Healthcare Informatics

Module 2: Informatics Standards

Module 3: Information Systems and the Electronic Health Record

Module 4: Consumer Information and Education Needs

Module 5: Practice Applications

Module 6: Practice and Research Applications

Module 7: Legal and Ethical Issues and Genomics

## Discussions

This class will include student participation and discussion. Participation/discussion will be graded and accounts for 30% of your final grade. The discussion rubric:

<b>Criteria</b>	<b>Exceeds Expectations 4 Points</b>	<b>3</b>	<b>Meets Expectations 2 Points</b>	<b>1</b>	<b>Does not Meet Expectations 0 Points</b>
<b><i>Quantity of weekly contribution</i></b>	Very Good. Concise. Postings were meaningful and multiple in nature.		Too many and not concise. Rambled on too long and/or too often.		Too few. Minimal participation.
<b><i>Quality and Relevance of contribution</i></b>	Excellent. Meaningful posting focused on identified topic added value to the discussion and engaged peers in dialogue.		Acceptable. Meaningful posting mostly added value to the discussion and/or engaged peers in dialogue. Inconsistently focused on topic.		Poor. Postings did not add value and/or failed to acknowledge peers' discussion. Mostly communicated things that would have been better individual private email.
<b><i>Scholarliness of contribution</i></b>	Well read as evidenced by references to pertinent resources (assigned or additional).		Seemed only partially prepared for seminar/forum discussion. Minimal or irrelevant resource contribution.		Postings tended to lack evidence of reading and preparation. No additional resources contributed.

## Papers

There are 2 papers required for this course and are due on Week 8 and Week 15. Guidelines and rubrics can be found in the course syllabus. Paper 1 accounts for 20% of your final grade. Paper 2 accounts for 20% of your final grade.

## Grades

Course grades are based on the requirements listed above. Due dates can be found in the Course Calendar.

<b>ASSIGNMENT</b>	<b>PERCENT OF FINAL GRADE</b>
Participation	30%
Discussions online	20%
Paper 1: Evaluation of Health Information Resources on the Internet	20%
Presentation of paper	10%
Paper 2: Informatics Applications to Support Nursing Practice (group)	20%
Total	100%

## Grading Scale

The scale for the grades is listed below.

<b>Grade</b>	<b>Percent</b>
<b>A</b>	<b>94-100</b>
<b>A-</b>	<b>92-93</b>
<b>B+</b>	<b>90-91</b>
<b>B</b>	<b>85-89</b>
<b>B-</b>	<b>82-84</b>
<b>C+</b>	<b>80-81</b>
<b>C</b>	<b>75-79</b>
<b>C-</b>	<b>73-74</b>
<b>D+</b>	<b>71-72</b>
<b>D</b>	<b>65-70</b>
<b>D-</b>	<b>63-64</b>
<b>F</b>	<b>&lt;63</b>

## Papers

There are 2 academic papers required for this course. Each will be described in detail.

### **Guidelines for Paper 1: Evaluation of Health Information Resources on the Internet**

The purposes of this assignment are to: develop **critical thinking skills**; deepen understanding of the concept "**health literacy**" and its implications for patients, families, and nurses; and develop skills to **critically appraise health-related Internet resources** that may be used for patient education. Professional nurses need to evaluate the quality and usefulness of health information resources. These resources are often used by patients and families to learn about a specific health condition or procedure, and as such, have implications for their decision-making. A variety of specific criteria are available to help nurses evaluate health information resources on the Internet. For this assignment, you will use a set of criteria developed by the National Library of Medicine to evaluate the quality and reliability of health information on a website.

Before you begin writing the paper, you need to identify an Internet resource (e.g., website) that provides health information for patients and families. This Internet resource can be in your area of practice or interest. Select a website or a set of pages from a website, rather than just one webpage. To locate and select a website: Try using the Google search engine and search for "patient education about [fill in your topic of interest]" or "[topic of interest] patient education." For example, if your topic of interest is diabetes, you would Google "patient education about diabetes" or "diabetes patient education." **Do not select a website that is intended for health professionals only - your paper will not be accepted if the website is not intended for patients and families.**

Write a brief report on what you found (5 or fewer pages) using the following steps:

**Step 1. Introduction.** Be sure to include support from the literature.

- Define health literacy.
- Discuss the importance of health literacy in patient/family management of health and disease and promotion of positive health outcomes.
- Discuss the nurse's role in promoting health literacy. Why must nurses and other health professionals know how to evaluate health-related websites?

**Step 2. Health-related Internet Resource.** Identify and describe a health-related resource (i.e., website) that can be used to promote patients' and families' knowledge about a disease or health condition.

- Identify the homepage of the website by URL.
- Describe the website. Consider such elements as graphics, page layout, navigation menu and ease of navigation, font size (ease of reading), etc.

**Step 3. Evaluation.** Provide an evaluation of the website using the four specific categories and criteria described in [National Library of Medicine \(NLM\) tutorial](http://www.nlm.nih.gov/medlineplus/webeval/webeval.html) (<http://www.nlm.nih.gov/medlineplus/webeval/webeval.html>).

These are the four categories included in the NLM tutorial. CHOOSE TWO. To identify the specific criteria to use in evaluating each category, you will need to complete the NLM tutorial. It is highly recommended that you take notes as you complete the tutorial.

- Provider and purpose
- Funding
- Information quality
- Privacy

**Step 4. Summary.** Present strengths, limitations, and implications based on evaluation:

- Synthesize the strengths and limitations of the website based on the evaluation and in relation to its use by patients.
- Include your perspective regarding the implications (i.e., potential areas of concern, unintended consequences) of using this website for patient education. This may include issues related to accessibility, literacy level, need for accommodations (related to language, cognitive and/or physical limitations), and patient/family use of the website in unintended ways.

Present recommendations for improvement (if any):

- Discuss recommendations and rationale for improvement of the website based on strengths, limitations, and implications. Provide at least two specific examples for improvement of the website based on the evaluation.

	<b>Points Earned</b>	<b>Exceeds Expectations</b>	<b>Meets Expectations</b>	<b>Does Not Meet Expectations (0-1 point)</b>
<b>Define Health Literacy</b>		Defines health literacy and why it is important to nurses and patients (3 points).	Defines health literacy and why it is important (2.5 points).	Incorrect or incomplete definition of health literacy.
<b>Identify and describe the website selected for evaluation</b>		Clearly states URL for website Home page. Brief but comprehensive overview of website (2 points).	URL is stated and overview of website provided (1.5 points).	Incomplete overview of website.

<b>Evaluation of website</b>		Adequately reviews website addressing each criterion (10 points).	Addresses all but one criterion adequately (8.5 points).	Does not address 2 or more of the evaluation criteria.
<b>Recommendations for improvement</b>		Provides recommendations for improvements to website based on evaluation. Recommendations are relevant to use of the website in patient care (2 points).	Provides recommendations for website based on evaluation (1.5 points).	Does not provide recommendations for improvement.
<b>Writing</b>		Writing is clear, organized, and logical. Uses APA 6 <sup>th</sup> edition. Uses correct grammar, spelling and punctuation with only 1-3 errors (3 points).	Writing is general clear and organized. Uses APA 6 <sup>th</sup> edition. Uses correct grammar, spelling, and punctuation with 4-7 errors (2 points).	Writing is unclear and disorganized. Does not use APA 6 <sup>th</sup> edition. Grammar, spelling and punctuation are distracting to the reader. Difficult to read. >10 errors.
<b>Total points out of 20 possible</b>		20 points	16 points	

**Rubric for “Evaluation of Health Information Resources on the Internet.”** Adapted with permission from *Assessing Outcomes and Improving Achievement: Tips and Tools for Using Rubrics*, edited by Terrel L. Rhodes. Copyright 2010 by the Association of American Colleges and Universities.

## **Paper 2 (Informatics Applications to Support Nursing Practice) (20% of final grade + 10% presentation)**

### **Guidelines**

The purpose of this assignment is to demonstrate **critical thinking** in a discussion about the nurse's role in using health information technologies and applications to support the delivery of safe, quality nursing care; to facilitate continuity of care; and to promote patients’ participation in healthcare.

Write a paper to demonstrate your understanding and knowledge, **based on the literature**, of how two new health information and communication technologies (HICT) can be used by nurses to improve and evaluate professional practice. Remember to **reference the evidence** to support your ideas and discussion.

**Total page number (not including references and cover pages): 7-8 pages**

**Step 1. Introduction.** Explanation of Issues. Identify the purpose of the paper and why the topic is important. Consider issues related to nursing's role in the use of HICTs and the increasing prevalence of HICTs in healthcare.

**Step 2. Description of Two HICT Applications.** Briefly describe two health information and communication technology (HICT) applications (cite references as appropriate), selected from the following list:

- Clinical information system application (select only **one** application, e.g., care plan; medication administration application - eMAR, CPOE, bar-coding; electronic clinical documentation; clinical decision support tools, e.g., computerized alerts and reminders)
- Telehealth application in home care (select only one, e.g., home tele-monitoring for congestive heart failure [or other condition], medication management devices)
- Personal health record or patient portals (e.g., EPIC MyChart)
- Health-related applications (apps) for tablets and mobile phones (select one specific app, e.g., an app for sleep apnea or diabetes)
- Community health surveillance systems (e.g., Wisconsin immunization data system))

**Step 3. Discussion and Examples from Practice.** For the two applications or technologies selected, discuss how each can be used by nurses to meet the specific aims/expected outcomes. In your discussion, be sure to answer the question "How can nurses use the HICT applications to meet the following aims/expected outcomes?" The aims/expected outcomes are:

- Support safety and quality of nursing
- Consider caveats to practice and impact to patients
- Facilitate continuity of care and care coordination
- Partner with patients and families to participate in health care

Provide supporting evidence from the literature (i.e., research) for your discussion. Include one example (or more) for each HICT application that specifically illustrates how the application can be used by the nurse to meet each of the three aims/expected outcomes listed above.

**Step 4. Student's Perspective**

- Discuss your perspective regarding the unexpected outcomes or unintended consequences (i.e., areas of concern) with the use of each HICT.
- Be sure to take the following into account: the complexities of the application use, context of use (e.g., patient circumstances that impact use), and assumptions (made by the patient and/or the healthcare provider).
- Support your perspective with evidence from the literature (i.e., research).
- Suggest approaches to address unexpected outcomes or unintended consequences (i.e., areas of concern).

Examples of questions to consider: Does each the application deliver what is promised? What are the limitations of each application? What populations are overlooked with regard to the use of the HICT application or technology?

**Step 5. Summary - Conclusions and Related Outcomes**

- Summarize opportunities and challenges you identified in nurses' use of the HICT applications.
- Provide a conclusion about the use of the HICT applications by nurses.

**Final Step: Short summary presentation of your selected applications as a group**

	<b>Points Earned</b>	<b>Exceeds Expectations</b>	<b>Meets Expectations</b>	<b>Does Not Meet Expectations (0 points)</b>
<b>Introduction</b>		Description of the purpose of the paper and importance of the topic are clear and concise (2 points).	Descriptions of the purpose of the paper and importance of the topic are concise but some relevant information is omitted or unclear (1 point).	No Introduction
<b>Describe 2 HICT Applications</b>		Descriptions of HICT applications selected from list provided are clear, concise and include relevant information (4 points).	Descriptions of HICT applications selected from list provided are concise but some relevant information is omitted or unclear (3 points).	Unclear or lengthy description of HICT application and/or did not select from list provided.
<b>Discusses how nurses can use HICT applications to meet identified aims and provides an example of each</b>		Discussion is clear, concise, organized, and supported by evidence from more than one source. Provides at least 1 clear example of how the nurse can use each of the HICT applications to meet identified aims with supporting evidence (18 points: 9 points for each HICT).	Discussion is generally clear and concise with evidence only from the textbook to support ideas. Examples of how the nurse can use each of the HICT applications to meet identified aims are unclear and/or lacking in supporting evidence (16 points: 8 points for	Discussion is unclear and/or supporting evidence is not included. Examples of how the nurse can use the selected HICT to meet aims are missing, unclear and/or without support.

			each HICT).	
<b>Summary</b>		Summary is based on contents of the paper. Clearly describes potential opportunities and challenges and what was interesting about this assignment. Clearly identifies 1 new technology or HICT area for future learning (2 points).	Summary is generally based on the contents of the paper. Description of potential opportunities and challenges and what was interesting about this assignment are generally clear. Identification of HICT for future learning is generally clear (1.5 points).	Lacks a summary based on the paper. Unclear about what was interesting about this assignment and/or about a new HICT area for future learning.
<b>Writing</b>		Writing is clear, organized and logical. Uses APA 6 <sup>th</sup> edition. Uses correct grammar, spelling and punctuation with 1-3 errors (4 points).	Writing is generally clear and organized. Uses APA 6 <sup>th</sup> edition. Uses correct grammar, spelling, and punctuation with 4-7 errors (2.5 points).	Writing is unclear and disorganized. Does not use APA 6 <sup>th</sup> edition. Grammar, spelling and punctuation are distracting to the reader and does not convey ideas with > 10 errors.
<b>Total Points out of 30 possible</b>		30	24	

**Rubric for “Informatics Applications to Support Nursing Practice.”** Adapted with permission from *Assessing Outcomes and Improving Achievement: Tips and Tools for Using Rubrics*, edited by Terrel L. Rhodes. Copyright 2010 by the Association of American Colleges and Universities.

## Academic Integrity Policy

Students who engage in academic misconduct are subject to disciplinary penalties, including the possibility of failure in the course and dismissal from the university. Academic misconduct includes but is not limited to cheating, plagiarism, collusion, and submission for credit of any work or materials that are attributable in whole or in part to another person, taking an examination for another person, any act designed to give unfair advantage to a student or the attempt to commit such act.

U of Wisconsin System Code (UWS Ch. 14-14.03 (2) provides specific examples of academic misconduct and reads in part: "Examples of academic misconduct include, but

are not limited to: cheating on an exam; collaborating with others in work presented, contrary to the stated rules of the course; submitting a paper or assignment as one's work when a part or all of the paper or assignment is the work of another; submitting a paper or assignment that contains ideas or research of others without appropriately identifying the source of those ideas ... knowingly and intentionally assisting another student in any of the above ..." The code is available at [http://docs.legis.wisconsin.gov/code/admin\\_code/uws/14.pdf](http://docs.legis.wisconsin.gov/code/admin_code/uws/14.pdf).

The University of Wisconsin campuses have specific procedures to investigate and deal with academic misconduct.

## **Plagiarism**

Because of paper mills selling reports, Web pages, and full-text online databases instances of plagiarism are increasing on campuses. Using someone's words without quoting the person is plagiarism. Using someone's ideas, even though the person's words are different from your words, without citing the source is plagiarism. Use in-text citations to cite your sources. For example, if you use the ideas cited in an article, place the author and publication year (e.g. Smith, 2010) at the end of the sentence. UW-System has subscribed to software that helps detect instances of plagiarism. Plagiarism will result in a failing grade. Reports of plagiarism are also made to University administration.

## **Netiquette**

Online courses require a different set of communication skills than many of us may be used to in our daily lives. Many of you have taken an online course before and are familiar with netiquette.

It is important in this course, as in life, that we communicate respectfully with each other and are familiar with netiquette. It will be expected that everyone in this course follow netiquette guidelines when communicating with each other. See [Core Rules of Netiquette \(http://www.albion.com/netiquette/corerules.html\)](http://www.albion.com/netiquette/corerules.html).

## **Confidentiality**

When communicating information online or face to face based on personal or work-related experiences, keep in mind rules and policies of Family Educational Rights and Privacy Act (FERPA) and Health Insurance Portability and Accountability Act of 1996 (HIPAA). It is expected that students will judiciously protect the privacy of

patients, peers, family, or agency/institution by not disclosing confidential information outside of the course. To maintain anonymity methods such as alias or initials should be used. For more information on these laws, please refer to the following websites:

FERPA - <http://www2.ed.gov/policy/gen/guid/fpco/ferpa/students.html>

HIPAA - <http://www.hhs.gov/ocr/privacy/hipaa/understanding/summary/index.html>

## **Social Media Policy**

Consistent with American Nurses Association (ANA) principles for social media, whatever is posted on a social media site (Facebook, Twitter, YouTube, LinkedIn, etc.) instantly becomes available to the public, so keep content appropriate and confidential matters private. Regardless of the privacy settings, content can easily be made available to those outside of the user's preference settings. Be aware that all University and legal guidelines, such as Family Educational Rights and Privacy Act (FERPA) and Health Insurance Portability and Accountability Act of 1996 (HIPAA), also apply in social media sites.

The following is adapted from the American Nurses Association (ANA) Principles for Social Networking:

1. Nurses must not transmit or place online individually identifiable patient information.
2. Nurses must observe ethically prescribed professional patient - nurse boundaries.
3. Nurses should understand that patients, colleagues, institutions, and employers may view postings.
4. Nurses should take advantage of privacy settings and seek to separate personal and professional information online.
5. Nurses should bring content that could harm a patient's privacy, rights, or welfare to the attention of appropriate authorities.

For more information:

<http://www.nursingworld.org/FunctionalMenuCategories/MediaResources/PressReleases/2011-PR/ANA-NCSBN-Guieleines-Social-Media-Networking-for-Nurses.pdf>

## **Student Bereavement Policy**

Students who experience the death of a loved one should contact the faculty to arrange an excused absence.

## **Disability Policy**

Any student seeking accommodations under the Americans with Disabilities Act (ADA) should contact the Disability Services office on your home campus within the first week of the semester so that appropriate accommodations may be arranged.