Nursing Informatics
Purdue University

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Course credit: 3
Pre- or co-requisite: None

Course description: Integrates nursing science with computer technology and information science to identify, gather, process, and manage information. Emphasis on technology-based health applications, which support clinical, administrative, research, and educational decision-making enhancing the efficacy of nursing endeavors.

Course goals: The goal of this 3-credit online course is to build foundational informatics competencies, which are essential for advanced practice registered nurses (APRNs) to function safely and effectively in the digital healthcare environment. Course content and learning activities are designed to build foundational informatics competencies related to APRNs and help students achieve course objectives.

Course objective: At the end of this course, the student will achieve the following objectives:
1. Define informatics competencies for advanced practice nurses.
2. Use computer applications to aggregate and analyze data for evidence-based practice and quality improvement.
3. Describe systems theory and design as applied to health informatics.
4. Identify key trends and regulatory requirements for healthcare information systems.
5. Evaluate the strengths and weaknesses of health information systems in practice.
6. Explain the relationship among information technology, information literacy, and evidence-based practice.
7. Describe and critique taxonomic and terminology systems used in national efforts to enhance interoperability of information systems and knowledge management.
8. Describe how technology can be used to engage and empower patients as partners in managing their own health and healthcare experience.
9. Articulate ethical/legal issues that arise in using, designing, and managing healthcare information systems.

These objectives will be measured by performance on the course requirements indicated below.

Course textbook: McGonigle, D., & Mastrain, K. G. (2017). *Nursing informatics and the foundation of knowledge* (4th ed.). Burlington, MA: Jones & Bartlett Learning.
- See "Weekly Schedule" for assigned chapters to read for each week.
- To purchase books: Go to Amazon/Purdue link

(https://www.amazon.com/ulp?ref=clp_ulp_redirect_CAMPUS_PUR&zipcode=47906)
to order and pick up books on Purdue campus or deliver to home.

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

- Follow information in this book about APA writing style and format (e.g., in-text citation and references list). It is students' responsibility that all assignments follow APA style.
- Visit this course LibGuide, Citing & Research Tools tab (http://guides.lib.purdue.edu/c.php?g=352918&p=2378132) or/and Purdue Online Writing Lab (OWL; https://owl.purdue.edu/owl/research_and_citation/apa_style/apa_style_introduction.html) for additional resources to master APA writing style and format. Note. If information in Purdue OWL is not consistent with APA's *Publication Manual,* follow information in the *Publication Manual*.

Course grading and evaluation: Completion of assignments on due date is required. The course grade will be based on the following:

    30%   Quizzes
    40%   Assignments
    30%   mHealth Project

See "Weekly Schedule" for assignment due dates. Go to Assignments link within each week to find specific instructions, objectives, and evaluation criteria for most the above assignments. In general, instructions and objectives file related to these assignments will be released one week before due date.

All quizzes are due on Wednesdays by 11:59pm Eastern Time and cover the assigned chapter content. The lowest quiz score out of the 11 quizzes will be dropped. The "syllabus quiz" will be counted as part of the assignments instead of quizzes.

Assignments are due on the specified dates by 11:59pm eastern time. Submit all assignments in Blackboard by due date. DO NOT attach assignment file via email to faculty. No late assignment will be accepted. If you have problems to complete assignments by due date, you must make arrangements with faculty prior to due date.

Grading:
    A = 90-100%
    B = 80-89%
    C = 70-79%
    D = 60-69%
    F = Below 60%

Please note, satisfactory performance for any assignment or paper deserves a B. Only work with exceptional performance gets an A. Students must achieve a minimum grade of B in this course based on Purdue University Nursing Graduate Programs Student Handbook (https://www.purdue.edu/hhs/nur/students/graduate/documents/handbook.pdf).

Course format: Course information and materials are or will be available on Purdue's Blackboard online. Students should be proficient in using Purdue Blackboard Learn. Go to https://www.itap.purdue.edu/learning/tools/blackboard.html to learn more about Blackboard Learn. If you experience any technology issues related to Blackboard, please contact ITaP: https://www.itap.purdue.edu/help/.

- This course consists of learning modules (see "Weekly Schedule"). The objectives of each learning module are related to course objectives. The content of each module is built on the content of previous weeks.
- Faculty provides learning materials in each weekly module and will using coaching and mentoring approaches to help students learn. Strategies to promote active learning and frequent interactions between faculty and students will be used.
- Learning materials and assignments are designed to build student's informatics competencies (e.g., computer literacy, information literacy, information management, written communication, critical thinking, logical reasoning, etc.) related to APRNs.
- Assignments are developed to assess student's mastery of learning materials and achievement related to course goals and objectives.
- Faculty will grade assignments and/or provide feedback.

Course policies/expectations: Read and understand course syllabus. Follow instructions below to help you succeed in this course while building foundational informatics competencies related to APRNs.

Class participation:
- Plan to spend 9 to 12 hours per week for this 3-credit course.
- Actively participate in course-related activities to obtain optimal learning experiences (e.g., engaging in learning materials, completing assignments, and participating in online discussions).
- Read and comply with university's policy about class absences policy (https://www.purdue.edu/advocacy/students/absences.html). Contact faculty if you have problems to participate weekly learning activities. Absence of family emergency or sick leave will need proper documentation submitted right before you are back on campus, or your grade will be affected. A petition through the Office of the Dean of Students is required for a bereaved student to be eligible for grief absences (https://www.purdue.edu/studentregulations/regulations_procedures/classes.html).

Written communication:
- Communicate with clear, concise, and logical statements and have few or no errors in grammar and spelling (i.e., APA writing style) and support statements with accurate, credible, and reliable information source for all discussion posts and written assignments.
- Cite primary information source whenever possible. Tertiary information source is not acceptable. Follow APA citation format (e.g., in-text and references list) to present citation information.
- Describe in own words to demonstrate your competencies in reading comprehension, critical thinking, and logical reasoning as an APRN. No quotes or plagiarism are allowed. When a student uses quote(s) and citing source(s) but not describing in own

words, the corresponding assignment grade will be C or below. When a student commits plagiarism, the corresponding assignment grade will be 0 point and this student will be referred to the Office of the Dean of Students. Purdue prohibits "dishonesty in connection with any University activity. Cheating, plagiarism, or knowingly furnishing false information to the University are examples of dishonesty." [Part 5, Section III-B-2-a, Student Regulations] Furthermore, the University Senate has stipulated that "the commitment of acts of cheating, lying, and deceit in any of their diverse forms (such as the use of substitutes for taking examinations, the use of illegal cribs, plagiarism, and copying during examinations) is dishonest and must not be tolerated. Moreover, knowingly to aid and abet, directly or indirectly, other parties in committing dishonest acts is in itself dishonest." [University Senate Document 72-18, December 15, 1972] Refer to Purdue's student guide for academic integrity (https://www.purdue.edu/odos/osrr/academic-integrity/index.html) for details.

- Purdue Honors Pledge states "As a boilermaker pursuing academic excellence, I pledge to be honest and true in all that I do. Accountable together – we are Purdue." See this link to a web page for more details: https://www.purdue.edu/provost/teachinglearning/honor-pledge.html.

Electronic communication:
- Demonstrate professionalism in electronic communication (e.g., email, discussion board). Read Do's and Don'ts in the Dear Students (https://the8blog.wordpress.com/2015/10/13/dear-students/) in regards to communicating with a faculty.
- Check your Purdue emails (@purdue.edu) regularly (recommend every day during the week). If you choose to "subscribe" discussion board, you can receive an email with a link to the new post.
- Faculty will reply to student's emails or posts between 24 to 48 hours during the week and will not check emails on weekends. Plan to complete learning activities during the week and contact faculty if you have questions about learning content or assignments.

Accommodating students with disabilities: For students requiring special accommodations related to disabilities, written documentation approved by Disability Resource Center must be provided to the faculty at the beginning of the semester, so that the student and faculty can arrange for a mutually agreeable alternative accommodations as needed. It is the student's responsibility to notify the Disability Resource Center (http://www.purdue.edu/drc) of an impairment/condition that may require accommodations and/or classroom modifications.

Inappropriate behaviors: Students who demonstrate inappropriate classroom behaviors, will be penalized. "Purdue University is committed to providing a safe and secure campus environment for members of the university community. Purdue strives to create an educational environment for students and a work environment for employees that promote educational and career goals. Violent Behavior impedes such goals. Therefore, Violent Behavior is prohibited in or on any University Facility or while participating in any university activity" (abstract from: https://www.purdue.edu/policies/facilities-safety/iva3.html)

Nondiscrimination: Purdue University is committed to maintaining a community which recognizes and values the inherent worth and dignity of every person; fosters tolerance, sensitivity, understanding, and mutual respect among its members; and encourages each individual to strive to reach his or her own potential. In pursuit of its goal of academic excellence, the University seeks to develop and nurture diversity. The University believes that diversity among its many members strengthens the institution, stimulates creativity, promotes the exchange of ideas, and enriches campus life. Purdue University views, evaluates, and treats all persons in any University related activity or circumstance in which they may be involved, solely as individuals on the basis of their own personal abilities, qualifications, and other relevant characteristics. Purdue University prohibits discrimination against any member of the University community on the basis of race, religion, color, sex, age, national origin or ancestry, genetic information, marital status, parental status, sexual orientation, gender identity and expression, disability, or status as a veteran. The University will conduct its programs, services and activities consistent with applicable federal, state and local laws, regulations and orders and in conformance with the procedures and limitations as set forth in Purdue's Equal Opportunity, Equal Access and Affirmative Action policy which provides specific contractual rights and remedies. Additionally, the University promotes the full realization of equal employment opportunity for women, minorities, persons with disabilities and veterans through its affirmative action program. Any question of interpretation regarding this Nondiscrimination Policy Statement shall be referred to the Vice President for Ethics and Compliance (http://www.purdue.edu/ethics/) for final determination.

Emergencies: Go to Emergency Procedure Guide (https://www.purdue.edu/ehps/emergency_preparedness/flipchart/) to read relevant information (e.g., Purdue Alert, Sever Weather) and see more information at Key Emergency Preparedness Resources (https://www.purdue.edu/ehps/emergency_preparedness/index.html). When an emergency affects course requirements or due dates, announcement will be posted and sent from Blackboard to students' @Purude.edu email. Students are expected to read their @purdue.edu email on a frequent basis.

NUR 525 Nursing Informatics Weekly Schedule
Fall 2018

Week #	Book Chapters & Key Content	Assignments & Due Dates
Week 1 8/20-8/24	Introduction • Syllabus • Publication Manual of American psychological Association (APA)	Assignment 1: Syllabus quiz (due 8/22) Assignment 2: Self-introduction (due 8/24)
Week 2 8/27-8/31	Chapter 1, 21, 23 • Nursing science & the foundation of knowledge • Nursing research • Translational research & evidence-based practice	Quiz 1 (due 8/29) Assignment 3: Discussion 1 (due 8/31)
Week 3 9/3-9/7	Chapter 2 – 4 • Information, information science & information system • Computer science & the foundation of knowledge model • Cognitive science & cognitive informatics 9/3 Labor Day	Quiz 2 (due 9/5) mHealth Project: Search for mHealth topics and peer collaborators
Week 4 9/10-9/14 Week 5 9/17-9/21	Chapter 6 – 7 • Evolution of nursing informatics • Data, information, knowledge, & wisdom (DIKW) paradigm • Nursing informatics roles & competencies	Quiz 3 (due 9/12) mHealth Project: Propose potential mHealth topics (due 9/19)
Week 6 9/24-9/28	Chapter 9 – 11 • Systems development life cycle & organizational decision-making • Administrative information systems • Human-technology interface	Quiz 4 (due 9/26) mHealth Project: Acquire faculty's approval of mHealth Project topic (due 9/28)
Week 7 10/1-10/5	Chapter 13 – 15 • Workflow & meaningful use • Electronic health record (EHR) & clinical informatics • Informatics tools, patient safety, & quality outcomes	Quiz 5 (due 10/3) Assignment 4: Building your online presence (due 10/5)
Week 8 10/8-10/12	Appointment with faculty to discuss mHealth project 10/8 & 10/9 October Break	

Week 9 10/15-10/19	Chapter 5, 8, 12 • Ethical applications of informatics • Legislative aspects related to informatics • Electronic security	Quiz 6 (due 10/17) Assignment 5: Privacy and security awareness (due 10/19)
Week 10 10/22-10/26	Chapter 17 – 18 • Using informatics to promote community/population health • Telenursing & telehealth	Quiz 7 (due 10/24)
Week 11 10/29-11/2	Chapter 19 – 20 • Nursing informatics and nursing education	Quiz 8 (due 10/31) mHealth Project: Submit draft mHealth presentation PPT file (due 11/2)
Week 12 11/5-11/9	Chapter 22, 24 • Data mining • Bioinformatics, biomedical informatics, & computational biology	Quiz 9 (due 11/7)
Week 13 11/12-11/16	Chapter 16 • Patient engagement & connected health	Quiz 10 (due 11/14) mHealth Project: present mHealth project on scheduled date with faculty (due 11/21)
Week 14 11/19-11/23	Appointment with faculty to present mHealth project 11/22 & 11/23 Thanksgiving Holiday	
Week 15 11/26-11/30	Chapter 25, 26 • The art of caring in technology laden environment • Reflection and future of nursing informatics	Quiz 11 (due 11/28) Assignment 7: Discussion 2 (due 12/5) mHealth Project: Submit peer review (due 12/7)
Week 16 12/3-12/7		

The above schedule is subject to change. Readings and due date for assignments or quizzes may also vary given progress in the course. The faculty and the school reserve the right to revise this syllabus, verbally or in writing. Students are responsible for materials indicated above, whether explicitly discussed in class or not. It is also the students' responsibility to follow the "Announcements" section of the course website on Blackboard.