



Health Care Informatics
NURS 5324

Summer 2024

Scheduled Class Days and Times: Online

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Course Description: This course prepares the student to utilize informatics and health care technologies in the management of individuals, groups and organizations for the improvement of patient outcomes.

Prerequisite: Admission to any MSN program or enrolled in the PhD in Nursing program.

Student Learning Outcomes:

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

1. Analyze current and emerging technologies to optimize safety, cost effectiveness and health outcomes.
2. Utilize select theories that guide the application of informatics in health care and health education.
3. Promote policies that incorporate ethical principles and legal standards in the use of health information and technologies.

Required Textbooks and Readings:

American Psychological Association. (2020). *Publication manual of the American Psychological Association* (7th ed.). Washington, D.C.: Author. ISBN: 9781433832161

McGonigle, D., & Mastrian, K. G. (2024). *Nursing informatics and the foundation of knowledge* (6th edition). Burlington, MA: Jones & Bartlett. ISBN: 9781284293432

Assignments and Weights/Percentage/Point Values:

1. Application: Role Specific Data Analysis (Excel Part 1 & 2)	25%
2. Current Innovation Assignment	25%
3. Mid Term (12.5%) and Final Quiz (12.5%)	25%
4. Big Data Paper and Article Part 1 & Part 2	<u>25%</u>
Total:	100%

Grading Scale:

Specific guidelines and grading criteria for all assignments are in the Modules. Final grades for the course will be determined based upon the following point assignments:

- A - 90-100
- B - 80-89
- C - 70-79
- D - 60-69
- F - Below 60

Grades will not be rounded when calculating the average (79.5 is not rounded to 80 and 89.5 is not rounded to 90). Students are required to achieve an average of 80% (B) to successfully complete the course.

Although the university policy allows 60 days for grade appeals, the School of Nursing follows a stricter timeline of 10 days to facilitate students' timely progression through the curriculum. In the case of extenuating circumstances, please consult the Associate Dean of Academic Affairs for guidance.

Academic Integrity: Cheating of any kind, as defined in Section 8 of the UT Tyler Manual of Policies and Procedures (MOPP) for Student Affairs (<https://www.uttyler.edu/mopp/>), will not be tolerated. Consequences may include:

- reprimand
- exam failure
- course failure
- expulsion from the Nursing program
- expulsion from the University
- other consequences as assigned

Exam and homework materials, questions, and problems are the intellectual property of faculty, UT Tyler, or publishers.

- These materials may not be distributed without permission.
- Distributing them or uploading them to online resources destroys the integrity of the assignment and the course, allowing others an unfair advantage by letting them view the materials.
- Uploading these materials to online resources is a violation of UT Tyler's academic misconduct policies and may result in formal conduct charges.
- Sanctions for uploading or otherwise divulging the contents of these materials can include:
 - a reduced or failing grade on an assignment
 - a reduced or failing grade for the course
 - removal from the Nursing program
 - removal from UT Tyler

Late Policy: 5% will be deducted each day an assignment is past due unless prior arrangements have been made with your course faculty. Extenuating circumstances may apply.

Repeating a Course: Students repeating this course may not use previously submitted assignments nor utilize the same patients for an assignment. Submitting the same or slightly modified assignments from previous semesters is considered self-plagiarism and is subject to academic discipline, including failing the assignment or the course.

Attendance and Make-up Policy: Attendance / participation is expected. Make-up for exams, quizzes, assignments, clinical time missed is at the discretion of the instructor.

Graded Course Requirements Information:

- **Application: Role Specific Data Analysis:** Data Analysis Assignment #1: Students will learn how to use spreadsheets, an important skill for all nurse leaders. Data Analysis Assignment #2: Students will learn more advanced data analysis building on the knowledge and skills from Data Analysis #1. Select a data set that reflects your program of study (nurse executive, educator, and practitioner). Microsoft Excel will be used for all analyses. Instructions and grading criteria are posted in the “Assignments” tab.
- **Current Innovation Assignment:** Identify a current health care technology, summarize, and examine the pros and cons of the innovation (consider cost effectiveness and health outcomes, etc.). Use strengths to select members of an interdisciplinary team as an evaluation team. Instructions and grading criteria are posted in the “Assignments” tab.
- **Mid-Term and Final examination:** The mid-term and final quiz will serve as an assessment of the course materials and assigned readings. Instructions and blueprints are posted in the “Assignments” tab.
- **Big Data Assignment:** This is a two-part assignment: Part 1: Students will write a scholarly paper, following APA writing style, summarize information from an assigned documentary, identify and synthesize the evidence from a scholarly article, and discuss key ethical principles. Part 2: Post article and respond to a minimum of two peers. Instructions and grading criteria are posted in the “Assignments” tab as well as “Discussions.”

Please Note: Detailed information along with grading rubrics for all assignments will be provided in the Canvas course.

Important Course Dates:

Classes Begin: May 13, 2024

Census Date (withdraw without penalty): May 28, 2024

Last Date to Withdraw: July 16, 2024. Students please notify your course faculty and contact your advisor.

Course Schedule for NURS 5324 – Health Care Informatics

Summer 2024

Dates	Topics	Readings	Assignments
Week 1: May 13 Welcome to NURS 5324!	Module 1. Building Blocks of Nursing Informatics <ul style="list-style-type: none"> • Nursing Science and Concepts of knowledge • Introduction to Information, Information Science, and Information Systems • Computer Science and the Foundation of Knowledge Model <p>Class Notes: Introduction to Health Care Informatics; Informatics and Evidence-based Practice (Class Notes)</p>	UT Tyler Syllabus Module Chapters 1, 2, & 3 Class Notes	Review APA and Plagiarism Review in Modules. Then, take the required APA Quiz to unlock all course information Complete the following – due May 20th : <ul style="list-style-type: none"> • APA Quiz • Introductions (Part 1 & 2) • Graduate Affirmation Forms Quiz • “Getting to Know You” Student Information Questionnaire • Attestation: Personal Digital File Download
Week 2: May 20	Module 2. Perspectives on Nursing Informatics <ul style="list-style-type: none"> • History and Evolution of Nursing Informatics • Nursing Informatics as a Specialty <p>Class Notes: Theories used in Health Care Informatics</p>	Chapters 6 & 7 Class Notes	Data Analysis Skills Pre-Assessment Survey due May 27th – submit via Assignments
Week 3: May 27	Module 3 (Part 1). Cognitive Science and Legislative Aspects, Part 1	Chapter 4 & 8	Role Specific Data Analysis Skills Part 1 Assignment (Part 1 A & B) and Quiz due June 3rd – submit via Assignments

Dates	Topics	Readings	Assignments
	<ul style="list-style-type: none"> • Introduction to Cognitive Science and Cognitive Informatics • Legislative Aspects of Nursing Informatics: HIPAA, HITECH and Beyond <p>Class Notes – Review: The Internet, Part 1</p>	Class Notes	
Week 4: June 3	Module 3 (Part 2). Cognitive Science, Ethical Applications, and Legislative Aspects, Part 2 <ul style="list-style-type: none"> • Ethical Applications of Informatics 	Chapter 5	
Week 5: June 10	Module 4 (Part 1). Education Applications of Nursing Informatics, Part 1 <ul style="list-style-type: none"> • Nursing Informatics and Nursing Education <ul style="list-style-type: none"> ○ QSEN Competencies ○ TIGER Initiative ○ Online Instruction ○ Social networking <p>Class Notes – Review: Informatics in Health Care Education, Part 1</p>	Chapter 19 Class Notes	<p>“Current Innovation” Assignment (submit via Module 4 Part 2) – due June 17th</p> <p>Post “Current Innovation” to “Discussions” or via Module 4 Part 2) – due June 17th</p>

Dates	Topics	Readings	Assignments
Week 6: June 17	Module 4 (Part 2). Education Applications of Nursing Informatics, Part 2 Simulation, Game Mechanics, Virtual Worlds, and the Realities in Nursing Education Class Notes – Review: Informatics in Health Care Education, Part 2		Role Specific Data Analysis Skills Part 2 Assignment – due June 24th
Week 7: June 24	Mid-Term Quiz	Chapter 20 Class Notes	Mid-Semester Course Evaluation and Feedback posted July 1st in “Discussions” Mid-Term Quiz – due July 1st
Week 8: July 1 July 4th -School Holiday: Happy 4th of July	Module 5. Nursing Informatics Practice Applications: Care Delivery <ul style="list-style-type: none"> • The Electronic Health Record and Clinical Informatics • Informatics Tools to Promote Patient Safety, Quality Outcomes, and Interdisciplinary Collaboration Class Notes: Informatics and Patient Care: Part 1	Chapters 14 & 15 Class Notes	Role Specific Data Analysis Skills Part 2 Post-Assessment Survey found in Canvas – due July 8th

Dates	Topics	Readings	Assignments
<p>Week 9: July 8th</p>	<p>Module 6. Nursing Informatics Practice Applications: Care Delivery</p> <ul style="list-style-type: none"> • Patient Engagement and Connected Health • Using Informatics to Promote Community and Population Health • Telenursing and Remote Access Telehealth <p>Class Notes: Telehealth and Other Patient Care Applications</p>	<p>Chapters 16, 17, & 18</p> <p>Class Notes</p>	<p>Begin preparing for your Big Data paper.</p>
<p>Week 10: July 15</p> <p>July 16th – Last Day to Withdraw from Classes</p>	<p>Module 7. Nursing Informatics Administrative Applications: Pre-care and Care Support</p> <ul style="list-style-type: none"> ○ Systems Development Life Cycle: Nursing Informatics and Organizational Decision Making ○ Administrative Information Systems ○ The Human-Technology Interface ○ Electronic Security ○ Achieving Excellence by Managing Workflow and Initiating Quality Projects 	<p>Chapters 9, 10, 11, 12, & 13</p> <p>Class Notes</p>	<p>“Big Data” Assignment Paper due July 22nd (submit via Assignments)</p>

Dates	Topics	Readings	Assignments
	Class Notes: Administrative Applications of Informatics		
Week 11: July 22	Module 8. Research Applications of Nursing Informatics <ul style="list-style-type: none"> ○ Nursing Research: Data Collection, Processing, and Analysis ○ Informatics Based Research Processes: Data Mining and Artificial Intelligence ○ Generating and Translating Evidence for Practice ○ The Art of Caring in Technology- Laden Environments Class Notes: Informatics and Research	Chapters 21, 22, 23, & 24 Class Notes	“Big Data” Assignment Part 2 – Article and Peer Responses: Post your article and read the Big Data Articles posted by your peers and respond to a minimum of two of your peers' articles in “Discussions” – due July 29th
Week 12: July 29 Week 13: August 5	Imagining the Future of Informatics <ul style="list-style-type: none"> ○ Our Expanding Realities and the Metaverse ○ Genetics/Genomics 	Chapter 25	
Week 14: August 12 th	Final Quiz		Final Quiz due by Monday, August 12th

*All assignments, quizzes, and exams are due on or before midnight (Central Time) of the assigned date.

School of Nursing Policies and Additional Information:

https://www.utt Tyler.edu/nursing/college/student_guide_and_policies.php

Student Resources and University Policies are provided in Canvas.