



Health Care Informatics
NURS 5324

Spring 2024

Scheduled Class Days and Times: Online

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Office Hours: Virtual Office Hours: Wednesdays: 10 a.m. – 1 p.m. CST and available via appointment, email, conference call, and/or Zoom.

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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. (2021). *Nursing informatics and the foundation of knowledge* (5th edition). Burlington, MA: Jones & Bartlett. ISBN: 9781284220469

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: January 11, 2024

Census Date (withdraw without penalty): January 24, 2024

Spring Break: March 11 – 15, 2024

Last Date to Withdraw: March 23, 2024. Students please notify your course faculty and contact your advisor.

Course Schedule for NURS 5324 – Health Care Informatics

Spring 2024

Dates	Topics	Readings	Assignments
Week 1: January 11 – 14	Welcome to NURS 5324!	UT Tyler Syllabus Module	The Canvas course is open and ready for viewing.
Week 2: January 16 – 22 9/15 (Monday): Martin Luther King, Jr. Holiday	Module 1. Building Blocks of Nursing Informatics/Introduction to Health Care Informatics <ul style="list-style-type: none"> • Nursing Science and the Concepts of Knowledge • Introduction to Information, Information Science, and Information Systems • Computer Science and the Foundation of Knowledge Model • Informatics and Evidence-based Practice (Class Notes) <p>Class Notes: Introduction to Health Care Informatics</p>	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 January 22nd: <ul style="list-style-type: none"> • Introductions (Part 1 & 2) • Graduate Affirmation Forms Quiz • “Getting to Know You” Student Information Questionnaire • Attestation: Personal Digital File Download

Dates	Topics	Readings	Assignments
Week 3: January 22 – 29	Module 2. Perspectives on Nursing Informatics <ul style="list-style-type: none"> • History and Evolution of Nursing Informatics • Nursing Informatics as a Specialty • Theorems and standardize languages Class Notes: Theories used in Health Care Informatics	Chapters 6 & 7 Class Notes	Data Analysis Skills Pre-Assessment Survey due January 29th – submit via Assignments
Week 4: January 29 – February 5	Module 3 (Part 1). Cognitive Science and Legislative Aspects, Part 1 <ul style="list-style-type: none"> • Introduction to Cognitive Science and Cognitive Informatics • Legislative Aspects of Nursing Informatics: HIPAA, HITECH and Beyond Class Notes – Review: The Internet, Part 1	Chapter 4 & 8 Class Notes	Role Specific Data Analysis Skills Part 1 Assignment (Part 1 A & B) and Quiz due February 5th – submit via Assignments
Week 5: February 5 – 12	Module 3 (Part 2). Cognitive Science, Ethics, and Legislative Aspects, Part 2 <ul style="list-style-type: none"> • Components of the Internet 	Chapters 5 & 26 Class Notes	Mid-Semester Course Evaluation and Feedback posted February 12th in “Discussions”

Dates	Topics	Readings	Assignments
	<ul style="list-style-type: none"> • Ethical Applications of Informatics • Our Expanding Realities 		
Week 6: February 12 – 19	Mid-Term Quiz		Mid-Term Quiz – due February 19th
Week 7: February 19 – 26	Module 4 (Part 1). Informatics in Health Care Education, 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	“Current Innovation” Assignment (submit via Module 4 Part 2) – due February 26th Post “Current Innovation” to “Discussions” or via Module 4 Part 2) – due February 26th
Week 8: February 26 – March 4	Module 4 (Part 2). Informatics in Health Care Education, Part 2 <p>Simulation, Game Mechanics, Virtual Worlds, and the Realities in Nursing Education</p> <p>Class Notes – Review: Informatics in Health Care Education, Part 2</p>	Chapter 20 Class Notes	Role Specific Data Analysis Skills Part 2 Assignment due March 4th

Dates	Topics	Readings	Assignments
<p>Week 9: March 4 – 18</p> <p>Spring Break: March 11th - 15th</p>	<p>Module 5. Nursing Informatics Practice Applications: Care Delivery</p> <ul style="list-style-type: none"> • The Electronic Health Record and Clinical Informatics • Informatics Tools to Promote Patient Safety, Quality Outcomes, and Interdisciplinary Collaboration <p>Class Notes: Informatics and Patient Care: Part 1</p>	<p>Chapters 14 & 15</p> <p>Class Notes</p>	<p>Role Specific Data Analysis Skills Part 2 Post-Assessment Survey found in Canvas due March 18th</p>
<p>Week 10: March 18 – 25</p> <p>March 23rd – Last Day to Withdraw from Classes</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/Population Health • Telenursing and Remote Access Telehealth • Epidemiologic data <p>Class Notes: Telehealth and Other Patient Care Applications</p>	<p>Chapters 16, 17, & 18</p> <p>Class Notes</p>	
<p>Week 11: March 25 – April 1</p>	<p>Module 7. Nursing Informatics Administrative Applications: Pre-care and Care Support</p>	<p>Chapters 9, 10, 11, & 13</p> <p>Class Notes</p>	<p>“Big Data” Assignment Paper due April 1st (submit via Assignments)</p>

Dates	Topics	Readings	Assignments
	<ul style="list-style-type: none"> ○ Systems Development Life Cycle: Nursing Informatics and Organizational Decision Making ○ Administrative Information Systems ○ The Human-Technology Interface ○ Achieving Excellence by Managing Workflow and Initiating Quality Projects <p>Class Notes: Administrative Applications of Informatics</p>		
<p>Week 12: April 1 – 8</p>	<p>Module 8. Research Applications of Nursing Informatics</p> <ul style="list-style-type: none"> ○ Nursing Research: Data Collection, Processing, and Analysis ○ Data Mining as a Research Tool ○ Translational Research: Generating Evidence for Practice ○ The Art of Caring in Technology- Laden Environments <p>Class Notes: Informatics and Research</p>	<p>Chapters 21, 22, 23, & 25</p> <p>Class Notes</p>	<p>“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 April 8th</p>

Dates	Topics	Readings	Assignments
Week 13: April 8 – 14 Week 14: April 15 – 21	The Future of Informatics Genetics/Genomics	Chapter 24	
Week 15: April 22	Final Quiz		Final Quiz due by Monday, April 22nd

*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.