



**Health Care Informatics**

**NURS 5324**

**Spring 2023**

**Scheduled Class Days and Times: Online**

**Instructor's Name:** Melinda Hermanns, PhD, RN, PMH-BC, CNE, PN/FCN, ANEF (Sections .060 & .061)

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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.

\*Best way to contact me.

**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* (5<sup>th</sup> edition). Burlington, MA: Jones & Bartlett. ISBN: 9781284220469

If you are in a clinical course, all students are required to have an active InPlace subscription.

### 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	25%
5. ePortfolio	Optional

### 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.

**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 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.”.
- **ePortfolio:** ePortfolio is an optional, non-graded assignment and is a culmination of the student’s academic work throughout graduate nursing program.

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

#### **Important Course Dates:**

**Classes Begin:** January 9, 2023

**Census Date (withdraw without penalty):** January 20, 2023

**Last Date to Withdraw:** March 19, 2023. Students please notify your course faculty and contact your advisor.

**Final Quiz:** April 18, 2023

## Course Schedule for NURS 5324 – Health Care Informatics

### Spring 2023

Dates	Topics	Readings	Assignments
<p><b>Week 1:</b> January 9 - 17</p> <p><b>January 16th Martin Luther King, Jr. Holiday</b></p> <p><b>Welcome to the first week of the spring semester!</b></p>	<p>Overview of the Course</p> <p><b>Module 1. Building Blocks of Nursing Informatics/Introduction to Health Care Informatics</b></p> <ul style="list-style-type: none"> <li>• Nursing Science and the Concepts of Knowledge</li> <li>• Introduction to Information, Information Science, and Information Systems</li> <li>• Computer Science and the Foundation of Knowledge Model</li> <li>• Informatics and Evidence-based Practice (Class Notes)</li> </ul> <p>Class Notes - Review: Introduction to Health Care Informatics</p>	<p>Syllabus and other course documents in the Modules → Course Information</p> <p>Chapters 1, 2, &amp; 3</p> <p>Class Notes</p>	<p><b>Review APA and Plagiarism Review. Then, take the required APA Quiz to unlock all course information/assignments.</b></p> <p><b>Introductions (Part 1 &amp; 2) – due January 17<sup>th</sup> (Note this is a Tuesday, since Martin Luther King, Jr. Day is on a Monday).</b></p> <p><b>Complete the Graduate Affirmation Forms – Graduate Quiz – due January 17<sup>th</sup> (Note this is a Tuesday, since Martin Luther King, Jr. Day is on a Monday).</b></p> <p><b>Complete the Online “Getting to Know You” questionnaire – due January 17<sup>th</sup> (Note this is a Tuesday, since Martin Luther King, Jr. Day is on a Monday).</b></p>

Dates	Topics	Readings	Assignments
<b>January 20<sup>th</sup></b>	<b>Census Date</b>		
<b>Week 2:</b> January 16 - 23	<b>Module 2. Perspectives on Nursing Informatics</b> <ul style="list-style-type: none"> <li>• History and Evolution of Nursing Informatics</li> <li>• Nursing Informatics as a Specialty</li> <li>• Theorems and standardize languages</li> </ul> <p>Class Notes: Theories used in Health Care Informatics</p>	Chapters 6 & 7  Class Notes	<b>Data Analysis Skills Pre-Assessment Survey due January 23<sup>rd</sup> - submit via Assignments</b>
<b>Week 3:</b> January 23 - 30	<b>Module 3 (Part 1). Cognitive Science and Legislative Aspects, Part 1</b> <ul style="list-style-type: none"> <li>• Introduction to Cognitive Science and Cognitive Informatics</li> <li>• Legislative Aspects of Nursing Informatics: HIPAA, HITECH and Beyond</li> </ul>	Chapter 4 & 8  Class Notes	<b>Role Specific Data Analysis Skills Part 1 Self-Study Video Tutorials, Assignment (Part 1 A &amp; B), and Quiz due January 30<sup>th</sup> – submit via Assignments</b>

Dates	Topics	Readings	Assignments
	Class Notes – Review: The Internet, Part 1		
<b>Week 4:</b> January 30 – February 6	<b>Module 3 (Part 2). Cognitive Science, Ethics, and Legislative Aspects, Part 2</b>  <ul style="list-style-type: none"> <li>• Components of the Internet</li> <li>• Ethical Applications of Informatics</li> <li>• Our Expanding Realities</li> </ul>	Chapters 5 & 26  Class Notes	<b>“Current Innovation” Assignment (submit via Module 4 Part 2) – due February 6<sup>th</sup></b>  <b>Post “Current Innovation” to “Discussions” or via Module 4 Part 2) – due February 6<sup>th</sup></b>
<b>Week 5:</b> February 6 – 13 <sup>th</sup>	<b>Module 4 (Part 1). Informatics in Health Care Education, Part 1</b>  <ul style="list-style-type: none"> <li>• Nursing Informatics and Nursing Education <ul style="list-style-type: none"> <li>○ QSEN Competencies</li> <li>○ TIGER Initiative</li> <li>○ Online Instruction</li> <li>○ Social networking</li> </ul> </li> </ul> Class Notes – Review: Informatics in Health Care Education, Part 1	Chapter 19  Class Notes	
<b>Week 6:</b> February 13 - 20	<b>Module 4 (Part 2). Informatics in Health Care Education, Part 2</b>  Simulation, Game Mechanics, Virtual Worlds, and the Realities in Nursing Education  Class Notes – Review: Informatics in Health Care Education, Part 2	Chapter 20  Class Notes	<b>Role Specific Data Analysis Skills Part 2 Self-Study Video Tutorials and Assignment due February 13<sup>th</sup></b>

Dates	Topics	Readings	Assignments
<b>Week 7:</b> February 20 - 27	<b>Mid-Term Quiz</b>		<b>Mid-Term Quiz – due February 20th</b>  <b>Mid-Semester Course Evaluation and Feedback posted in “Discussions”</b>
<b>Week 8:</b> February 27 – March 6	<b>Module 5. Nursing Informatics Practice Applications: Care Delivery</b> <ul style="list-style-type: none"> <li>• The Electronic Health Record and Clinical Informatics</li> <li>• Informatics Tools to Promote Patient Safety, Quality Outcomes, and Interdisciplinary Collaboration</li> </ul> Class Notes: Informatics and Patient Care: Part 1	Chapters 14 & 15  Class Notes	<b>Role Specific Data Analysis Skills Part 2</b> <b>Post-Assessment Survey found in Canvas due February 27<sup>th</sup></b>



Dates	Topics	Readings	Assignments
<b>Week 9:</b> March 6 - 12	<b>Module 6. Nursing Informatics Practice Applications: Care Delivery</b> <ul style="list-style-type: none"> <li>• Patient Engagement and Connected Health</li> <li>• Using Informatics to Promote Community/Population Health</li> <li>• Telenursing and Remote Access Telehealth</li> <li>• Epidemiologic data</li> </ul> Class Notes: Telehealth and Other Patient Care Applications	Chapters 16, 17, & 18  Class Notes	
<b>Week 10:</b> March 13 - 18	Spring break – enjoy!		
<b>Week 11:</b> March 20 - 27  <b>March 20<sup>th</sup> -Last Day to Withdraw from Classes</b>	<b>Module 7. Nursing Informatics Administrative Applications: Pre-care and Care Support</b> <ul style="list-style-type: none"> <li>○ Systems Development Life Cycle: Nursing Informatics and Organizational Decision Making</li> <li>○ Administrative Information Systems</li> <li>○ The Human-Technology Interface</li> </ul>	Chapters 9, 10, 11, & 13  Class Notes	<b>“Big Data” Assignment Paper due March 27<sup>th</sup> (submit via Assignments).</b>

Dates	Topics	Readings	Assignments
	<ul style="list-style-type: none"> <li>○ Achieving Excellence by Managing Workflow and Initiating Quality Projects</li> </ul> <p>Class Notes: Administrative Applications of Informatics</p>		
<p><b>Week 11:</b> March 27 – April 3</p>	<p><b>Module 8. Research Applications of Nursing Informatics</b></p> <ul style="list-style-type: none"> <li>○ Nursing Research: Data Collection, Processing, and Analysis</li> <li>○ Data Mining as a Research Tool</li> <li>○ Translational Research: Generating Evidence for Practice</li> <li>○ The Art of Caring in Technology-Laden Environments</li> </ul> <p>Class Notes: Informatics and Research</p>	<p>Chapters 21, 22, 23, &amp; 25</p> <p>Class Notes</p>	<p><b>“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 3<sup>rd</sup></b></p>
<p><b>Week 12:</b> April 3 - 10</p>	<p>The Future of Informatics</p> <ul style="list-style-type: none"> <li>● Genetics/genomics</li> </ul>	<p>Chapter 24</p>	<p><b>Create your e-Portfolio (ePortfolio is optional)</b></p>
<p><b>Week 13 &amp; 14:</b> April 10 - 18</p>	<p><b>Final Quiz for the Spring Term</b></p>		<p><b>Final Quiz due by Tuesday, April 18</b></p>

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

**UT Tyler School of Nursing Justice, Equity, Diversity and Inclusion Statement:**

The University of Texas at Tyler School of Nursing aspires to create, foster, and sustain a culture of justice, equity, diversity, and inclusion irrespective of one's identity. We value and embrace all backgrounds, experiences, and identities, realizing that no one group, person or perspective has all the answers. We are richer when our individual skills, knowledge, experiences, cultures, backgrounds, and identities are combined in an accepting community. We strive to ensure that every individual gets a fair and equal chance to participate and thrive in a nurturing environment where all feel a sense of belonging. We are committed to intentionally and deliberately creating a diverse community that instills a sense of equitable justice and belonging for everyone affiliated with our school.

**School of Nursing Policies and Additional Information:**

[https://www.uttyler.edu/nursing/college/student\\_guide\\_and\\_policies.php](https://www.uttyler.edu/nursing/college/student_guide_and_policies.php)

**Student Resources and University Policies are provided in Canvas.**