



Health Care Informatics
NURS 5324 (all sections)
Fall 2021

Scheduled Class Days and Times: Online

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

Office: BRB 2105

Phone: 903.566.7320

Email: mhermanns@uttyler.edu*

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.

Instructor's Name: Jerri Post, PhD, RN (Sections .062 and .063)

Office: Remote (Adjunct faculty)

Phone: 870.260.2276

Email: jpost@uttyler.edu*

Office Hours: Virtual Office Hours: Mondays: 7 a.m. – 10 a.m. CST; also 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:

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

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

Assignments and Weights/Point Values:

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|--|----------|
| 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.

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:** Learning how to effectively use spreadsheets is important for all nurse leaders. Whether it is to collect, monitor, and report on data or do advanced data analysis, having skills in using spreadsheets will benefit the nurse executive, educator, and practitioner. For this 3-part assignment, you will be using Microsoft Excel, but the skills and understanding apply to any spreadsheet applications. We will use data sets that are role specific. All UT Tyler students have access to Office 365 at <https://www.uttyler.edu/it/office365/365-students.php> <https://www.uttyler.edu/it/office365/365-students.php>.
- **Current Innovation Assignment:** Students will identify a current health care technology, summarize, and examine the pros and cons of the innovation (consider cost effectiveness and health outcomes, etc.). As part of the evaluation of your innovation, students will select members of an interdisciplinary team based on a list of strengths from *StrengthsFinders* provided for the purpose of preparing the students for future presentation and implementation of technological and other health care innovations. 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. *Please note: There are self-assessment quizzes for each Module to “test your knowledge.” While these quizzes are non-graded, they are optional; however, I would highly recommend that you consider taking the quizzes to assess your current knowledge of the content Modules.
- **Big Data Paper – Part 1:** View the “PBS Nova The Human Face of Big Data Life Documentary” posted in the “Assignments” tab. Next, access the UT Tyler Library CINAHL database using the search terms provided on the instruction sheet (in the “Assignments” tab) and locate a journal article on “Big Data.” Students will upload a

two-page typed paper which will comprise of three paragraphs. First paragraph: Summarize your article in one paragraph. Second paragraph: Document your thoughts regarding the required video, "PBS Nova The Human Face of Big Data Life Documentary." Third paragraph: Type your reflections regarding the ethics and future of "Big Data." Upload the paper to "Assignments" and submit via the "Assignments" tab. Please refer to the grading rubric posted in the "Assignments" tab. Post your article to "Big Data" Discussion. **Big Data Paper – Part 2:** Respond to a minimum of two of your peers' articles in the "Big Data" Discussion.

- **ePortfolio:** ePortfolio is an optional non-graded assignment. The purpose of an ePortfolio is to showcase your course work to a potential employer.

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

Calendar of Topics, Readings, and Due Dates:

| Dates | Topics | Readings | Assignments |
|---|---|---|---|
| <p>Week 1: August 30 - September 7</p> <p>September 6th Labor Day holiday</p> <p>Welcome to the first week of the fall semester! 😊</p> | <p>Overview of the Course</p> <p>Module 1. Building Blocks of Nursing Informatics/Introduction to Health Care Informatics</p> <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 - Review: Introduction to Health Care Informatics</p> | <p>Syllabus and other course documents in the Modules → Course Information</p> <p>Chapters 1, 2, & 3</p> <p>Class Notes</p> | <p>Review APA and Plagiarism Review. Then, take the required APA Quiz to unlock all course information/assignments.</p> <p>Complete the Nursing Student Forms – Graduate Quiz – due September 7th – submit via Assignments (Note this is a Tuesday, since Labor Day is a Monday).</p> <p>Complete the Online “Getting to Know You” questionnaire – due September 7th - submit via Assignments (Note this is a Tuesday, since Labor Day is a Monday).</p> <p>Introductions – due September 7th – (Note this is a Tuesday, since Labor Day is a Monday).</p> |
| <p>September 10th</p> | <p>Census Date</p> | | |

| Dates | Topics | Readings | Assignments |
|-------------------------------------|--|------------------------------------|---|
| Week 2: September 8 - 13 | Module 2. Perspectives on Nursing Informatics <ul style="list-style-type: none"> • History and Evolution of Nursing Informatics • Nursing Informatics as a Specialty • Legislative Aspects of Nursing Informatics: HIPAA, HITECH and Beyond • Theorems and standardize languages <p>Class Notes: Theories used in Health Care Informatics</p> | Chapters 6 & 7 Class Notes | Data Analysis Skills Pre-assessment survey due September 13th - submit via Assignments |
| Week 3: September 13 - 20 | 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 <p>Class Notes – Review: The Internet, Part 1</p> | Chapter 4 & 8 Class Notes | Role Specific Data Analysis Skills Part 1 Self-Study Video Tutorials and Assignment due September 20st – submit via Assignments |
| Week 4: September 20 - 27 | Module 3 (Part 2). Cognitive Science, Ethics, and Legislative Aspects, Part 2 <ul style="list-style-type: none"> • Components of the Internet • Ethical Applications of Informatics | Chapters 5 & 26 Class Notes | |

| Dates | Topics | Readings | Assignments |
|---|--|-------------------------------------|--|
| | <ul style="list-style-type: none"> • Our Expanding Realities | | |
| Week 5: September 27 - October 4 | 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 October 4th Post “Current Innovation” to “Discussions” or via Module 4 Part 2) – due October 4th |
| Week 6: October 4 - 11 | 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 Self-Study Video Tutorials and Assignment due October 11th |
| Week 7: October 11 - 18 | Module 5. Informatics in Patient Care Settings: Practice Applications: Care Delivery | Chapters 14 & 15 Class Notes | Role Specific Data Analysis Skills Part 2 Post-assessment survey found in Canvas due October 18th |

| Dates | Topics | Readings | Assignments |
|---|---|---|--|
| | <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>Week 8: October 18 - 25</p> | <p>Mid-term Quiz</p> | | <p>Mid-Term Quiz – due October 25th</p> <p>Mid-Semester Course Evaluation and Feedback posted in “Discussions.”</p> |
| <p>Week 9: October 25 - November 1</p> | <p>Module 6. Informatics in Patient Care Settings: 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>Mid-Semester Course Evaluation and Feedback posted in “Discussions” due November 1st.</p> |

| Dates | Topics | Readings | Assignments |
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| <p>Week 10: November 1 – 8</p> <p>November 2nd – 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 ○ Achieving Excellence by Managing Workflow and Initiating Quality Projects <p>Class Notes: Administrative Applications of Informatics</p> | <p>Chapters 9, 10, 11, & 13</p> <p>Class Notes</p> | <p>“Big Data” Paper and Article Part 1 due November 8th (submit via Assignments).</p> |
| <p>Week 11: November 8 - 15</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” Paper and Article Part 2 - Read Big Data Articles posted by your peers and respond to a minimum of two of your peers' articles in “Discussions” due November 15th</p> |

| Dates | Topics | Readings | Assignments |
|--|---|------------|---|
| Week 12: November 15 - 21 | Future of Informatics <ul style="list-style-type: none"> • Genetics/genomics | Chapter 24 | Create your e-Portfolio (ePortfolio is optional) |
| Week 13: November 22 - 28 | Thanksgiving Holiday | | |
| Week 14: November 29 - December 7 | Final Quiz for the Fall Term | | Final Quiz due by Tuesday, December 7th |

*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 to assist you in this course:

[UT Tyler Student Accessibility and Resource \(SAR\) Office](#) (provides needed accommodations to students with document needs related to access and learning)

[UT Tyler Writing Center](#)

[The Mathematics Learning Center](#)

[UT Tyler PASS Tutoring Center](#)

[UT Tyler Supplemental Instruction](#)

[Upswing \(24/7 online tutoring\) - covers nearly all undergraduate course areas](#)

[Robert Muntz Library \(Links to an external site.\)](#) and [Library Liaison](#)

[Canvas 101](#) (learn to use Canvas, proctoring, Unicheck, and other software)

Digital Support Toolkit (for supported courses only. Students are automatically enrolled in the toolkit for supported courses)

LIB 422 -- Computer Lab where students can take a proctored exam

[The Career Success Center](#)

[UT Tyler Testing Center](#)

[Office of Research & Scholarship Design and Data Analysis Lab](#)

Resources available to UT Tyler Students

[UT Tyler Counseling Center](#) (available to all students)

[TAO Online Support Center](#) (online self-help modules related to mental & emotional health)

[Military and Veterans Success Center](#) (supports for all of our military affiliated students)

[UT Tyler Patriot Food Pantry](#)

[UT Tyler Financial Aid and Scholarships](#)

[UT Tyler Registrar's Office](#)

[Office of International Programs](#)

[Title IX Reporting](#)

[Patriots Engage](#) (available to all students. Get engaged at UT Tyler.)

University Policies and Information

Withdrawing from Class: Students you are allowed to [withdraw](#) (drop) from this course through the University's [Withdrawal Portal](#). Texas law prohibits students who began college for the first time in Fall 2007 or thereafter from dropping more than six courses during their entire undergraduate career. This includes courses dropped at other 2-year or 4-year Texas public colleges and universities. Make sure to consider the impact withdrawing from this class has on your academic progress as well as the financial implications. We encourage you to consult your advisor(s) and financial aid for additional guidance. CAUTION #1: Withdrawing before census day does not mean you get a full refund. Please see the [Tuition and Fee Refund Schedule](#). CAUTION #2: All international students must check with the [Office of International Programs](#) before withdrawing. All international students are required to enroll full-time for fall and spring terms.

Final Exam Policy: Final examinations are administered as scheduled. If unusual circumstances require that special arrangements be made for an individual student or class, the dean of the appropriate college, after consultation with the faculty member involved, may authorize an exception to the schedule. Faculty members are required to maintain student final examination papers for a minimum of three months following the examination date.

Incomplete Grade Policy: If a student, because of extenuating circumstances, is unable to complete all of the requirements for a course by the end of the semester, then the instructor may recommend an Incomplete (I) for the course. The "I" may be assigned in lieu of a grade only when all of the following conditions are met: (a) the student has been making satisfactory progress in the course; (b) the student is unable to complete all course work or final exam due to unusual circumstances that are beyond personal control and are acceptable to the instructor; and (c) the student presents these reasons prior to the time that the final grade roster is due. The semester credit hours for an Incomplete will not be used to calculate the grade point average for a student.

The student and the instructor must submit an Incomplete Form detailing the work required and the time by which the work must be completed to their respective department chair or college dean for approval. The time limit established must not exceed one year. Should the student fail to complete all of the work for the course within the time limit, then the instructor may assign zeros to the unfinished work, compute the course average for the student, and assign the appropriate grade. If a grade has not been assigned within one year, then the Incomplete will be changed to an F, or to NC if the course was originally taken under the CR/NC grading basis.

Grade Appeal Policy: UT Tyler's Grade Appeal policy requires the completion of a Grade Appeal form for this action to take place. The grade appeal begins with the instructor of your course. If you do not agree with the decision of the instructor, you may then move your appeal to the department chair/school director for that course. If you are still dissatisfied with the decision of

the chair/director, you may move the appeal to the Dean of the College offering that course who has the final decision. Grade appeals must be initiated within sixty (60) days from the date of receiving the final course grade. The Grade Appeal form is found on the [Registrar's Form Library](#).

Disability/Accessibility Services: The University of Texas at Tyler has a continuing commitment to providing reasonable accommodations for students with documented disabilities. Students with disabilities who may need accommodation(s) in order to fully participate in this class are urged to contact the Student Accessibility and Resources Office (SAR) as soon as possible to explore what arrangements need to be made to ensure access. If you have a disability, you are encouraged to visit the [SAR Portal \(https://hood.accessiblelearning.com/UTTyler/\)](https://hood.accessiblelearning.com/UTTyler/) and complete the New Student Application. For more information, please visit the [SAR webpage](#) or call 903.566.7079.

Military Affiliated Students: UT Tyler honors the service and sacrifices of our military affiliated students. If you are a student who is a veteran, on active duty, in the reserves or National Guard, or a military spouse or dependent, please stay in contact with me if any aspect of your present or prior service or family situation makes it difficult for you to fulfill the requirements of a course or creates disruption in your academic progress. It is important to make me aware of any complications as far in advance as possible. I am willing to work with you and, if needed, put you in contact with university staff who are trained to assist you. Campus resources for military affiliated students are in the [Military and Veterans Success Center \(MVSC\)](#). The MVSC can be reached at MVSC@uttyler.edu, or via phone at 903.565.5972.

Academic Honesty and Academic Misconduct: The UT Tyler community comes together to pledge that "Honor and integrity will not allow me to lie, cheat, or steal, nor to accept the actions of those who do." Therefore, we enforce the [Student Conduct and Discipline policy](#) in the Student Manual Of Operating Procedures (Section 8).

FERPA: UT Tyler follows the Family Educational Rights and Privacy Act (FERPA) as noted in [University Policy 5.2.3](#). The course instructor will follow all requirements in protecting your confidential information.

COVID Guidance

Information for Classrooms and Laboratories: Students are required to wear face masks covering their nose and mouth, and follow social distancing guidelines, at all times in public settings (including classrooms and laboratories), as specified by [Procedures for Fall 2020 Return to Normal Operations](#). The UT Tyler community of Patriots views adoption of these practices consistent with its [Honor Code](#) and a sign of good citizenship and respectful care of fellow classmates, faculty, and staff.

Students who are feeling ill or experiencing symptoms such as sneezing, coughing, or a higher than normal temperature will be excused from class and should stay at home and may join the

class remotely. Students who have difficulty adhering to the Covid-19 safety policies for health reasons are also encouraged to join the class remotely. Students needing additional accommodations may contact the Office of Student Accessibility and Resources at University Center 3150, or call (903) 566-7079 or email saroffice@uttyler.edu.

Recording of Class Sessions: Class sessions may be recorded by the instructor for use by students enrolled in this course. Recordings that contain personally identifiable information or other information subject to FERPA shall not be shared with individuals not enrolled in this course unless appropriate consent is obtained from all relevant students. Class recordings are reserved only for the use of students enrolled in the course and only for educational purposes. Course recordings should not be shared outside of the course in any form without express permission.

Absence for Official University Events or Activities: This course follows the practices related to approved absences as noted by the Student Manual of Operating Procedures ([Sec. 1 -501](#)).

Absence for Religious Holidays: Students who anticipate being absent from class due to a religious holiday are requested to inform the instructor by the second class meeting of the semester.

Campus Carry: We respect the right and privacy of students who are duly licensed to carry concealed weapons in this class. License holders are expected to behave responsibly and keep a handgun secure and concealed. More information is available at <http://www.uttyler.edu/about/campus-carry/index.php>.