



**Informatics and Healthcare Technologies
NURS 7303 Section 002
Fall 2026**

Scheduled Class Days and Times: Online

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Virtual Office Hours: Weekly virtual office hours will be held on Wednesdays from 12:00 p.m. to 1:00 p.m., with opportunities for one-on-one appointments upon request. Additional days and times can be arranged to accommodate your schedule. To schedule a one-on-one appointment, please email the faculty. Link and schedule for weekly office hours will be provided in Canvas.

Course Description: This course introduces foundational principles of healthcare informatics, data management, and statistical analysis for quality improvement. Designed for DNP students with little to no prior experience in data science, the course covers data collection methods, process analysis, visualization techniques, and preparation for statistical evaluation. Students will explore the role of informatics in enhancing patient safety, optimizing clinical workflows, and supporting evidence-based decision-making. Through hands-on exercises and applied projects, students will develop practical skills in utilizing health information technologies and digital solutions to drive system improvements and deliver person-centered care.

Course Credit: 3 credit hours

Prerequisites: NURS 7314 & NURS 7315

Corequisites: none

Student Learning Outcomes:

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

1. Evaluate patient outcomes and healthcare quality using data analysis techniques, statistical methods, and performance metrics. (AACN 2.7, 5.1, 5.2, 7.3, 8.2)
2. Analyze the alignment of system data with comparative patient safety benchmarks, applying statistical reasoning to identify trends and opportunities for improvement. (AACN 4.2, 5.1, 5.2, 7.2, 7.3, 8.2, 8.3)
3. Apply statistical principles to assess healthcare datasets and inform evidence-based system improvement strategies. (AACN 4.2, 5.1, 7.3, 8.2)
4. Evaluate the unintended consequences of health information technologies on clinical workflows, interprofessional communication, and patient safety through data interpretation. (AACN 5.1, 5.2, 7.3, 8.1, 8.2, 8.4, 8.5)
5. Utilize information and communication technologies to collect, analyze, and interpret healthcare data, transforming statistical findings into meaningful clinical insights. (AACN 8.1, 8.2, 8.3, 8.4)

6. Integrate informatics processes and digital health solutions to support safe and person-centered care across all populations and care settings. (AACN 2.2, 2.3, 2.5, 2.7, 3.1, 8.2, 8.3, 8.4)

Required Textbooks and Readings:

All required readings & course materials are provided within the course. Refer to the modules in Canvas for access.

In DNP courses, all students are required to have an Exxat active subscription.

There may be additional assigned readings in the modules in Canvas.

Assignments and Weights/Percentage/Point Values:

Criteria for Evaluation:	Details	Percentage of Grade
Weekly Assignments	9 structured weekly submissions (reflections, mapping, mini-analyses, CDS Part 1, problem identification, etc.)	35%
Major Project #1 – Applied Statistics & Evidence Interpretation Critique	Sections 1–4 integrated critique	20%
CDS Scenario Analysis – Part 2 (Full Evaluation)	Human factors, workflow fit, risks, appropriateness, evaluation	10%
Major Project #2 – Systems Improvement Proposal (Final)	Part 1–4 integrated final proposal	20%
Final Reflection Video	Leadership synthesis, future vision	10%
Professionalism and Collegiality	Communication, engagement, timeliness, collegiality, professional behavior, responsiveness	5%
Total		100%

DNP Practice Hours Requirement: To successfully pass this course, students must complete and document a **minimum of 25 DNP Practice Hours** in Exxat. Proper and timely documentation in Exxat is mandatory and will be monitored for compliance.

Practice hours must be logged in Exxat within 7 days of completing the activity. Failure to log hours within this timeframe will result in the hours being disqualified for credit, and the activity will need to be repeated to count toward the required hours.

Failure to complete the required hours for the course or to accurately document them in Exxat will result in an **incomplete or course failure**, as meeting the hour requirement is essential for progression in the program. Students are responsible for ensuring that all hours are properly logged and verified within the designated timeframe.

Practice Hours and Affiliation Agreement Policy

Students are not authorized to complete any DNP practice hours, including activities related to the DNP project, at any site, including their place of employment, without a fully executed Affiliation Agreement between the academic institution and the practice site.

The Affiliation Agreement is a legal contract that ensures appropriate oversight, liability coverage, and compliance with institutional and clinical site policies. This agreement must be in place before the initiation of any practice hours at the proposed site.

Engaging in practice hours at a site without a formal agreement constitutes a violation of program policy and may result in a delay of hours being counted toward program requirements, academic penalties, or dismissal from the course.

Students are responsible for working with their DNP faculty and clinical placement coordinator to initiate and confirm the Affiliation Agreement process well in advance of the proposed start date for site-based activities.

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 complete the course successfully.

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

Use of Artificial Intelligence (AI) in this course:

UT Tyler is committed to exploring and using artificial intelligence (AI) tools as appropriate for the discipline and task undertaken. We encourage discussing AI tools' ethical, societal, philosophical, and disciplinary implications. All uses of AI should be acknowledged, as this aligns with our commitment to honor and integrity, as noted in UT Tyler's Honor Code. Faculty and students must not use protected information, data, or copyrighted materials when using any AI tool. Additionally, users should be aware that AI tools rely on predictive models to generate content that may appear correct but is sometimes shown to be incomplete, inaccurate, taken without attribution from other sources, and/or biased. Consequently, an AI tool should not be considered a substitute for traditional approaches to research. You are ultimately responsible for the quality and content of the information you submit. Misusing AI tools that violate the guidelines specified for this course (see below) is considered a breach of academic integrity. The student will be subject to disciplinary actions as outlined in UT Tyler's Academic Integrity Policy

For this course, AI is encouraged during the course, and appropriate acknowledgment is expected.

The responsible use of AI tools, such as ChatGPT, Copilot, or other generative platforms, is permitted and even encouraged in this course for enhancing your learning and supporting your academic work. AI tools may assist with

tasks such as outlining ideas, editing and revising written work, or identifying areas needing clarification. However, their use must follow academic integrity standards and be transparent.

If you choose to use AI tools in preparing your assignments:

- You must clearly indicate and properly cite any content that has been generated or significantly influenced by AI, following the 7th edition APA citation and reference guidelines.
- AI tools are not considered retrievable sources in the traditional sense. Therefore, APA recommends treating AI output as software or an algorithmic tool, with transparency about how it was used.
- You are expected to critically evaluate all AI-generated content to ensure accuracy, appropriateness, and relevance to your assignment. Use of incorrect or unvetted content may result in a loss of points.
- Your submitted work should read as a cohesive, scholarly product that integrates AI-assisted content appropriately and acknowledges it properly in the text and references.

Important Reminder for DNP Students

Even when properly cited:

- AI does not replace scholarly sources
- AI-generated content does not count as evidence
- Peer-reviewed literature must still support all claims

Some assignments may explicitly prohibit the use of AI tools to ensure that student learning objectives are met through independent critical thinking. When this is the case, it will be clearly stated in the assignment instructions. It is your responsibility to adhere to any restrictions provided.

Failure to appropriately disclose AI use or submitting AI-generated work without proper evaluation and citation may be considered a violation of academic integrity policies.

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 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.

Missed Assignments Policy: All course assignments are required components of this course and must be completed to receive a passing grade. If an assignment is missed, a grade of zero will be recorded and will remain as the final grade for that assignment. However, the assignment must still be completed and submitted, regardless of the grade penalty, to satisfy course completion requirements. Failure to submit all required coursework may result in a course failure, regardless of the final grade average.

Assignment Resubmission Policy: To support mastery learning and academic success, students are permitted to resubmit any assignment on which they initially earned less than 80%, under the following conditions:

- **One-time Resubmission:** Students may resubmit each eligible assignment only once.
- **Grade Cap:** The maximum grade that can be earned on any resubmitted assignment is 80%, regardless of the quality of the resubmission. All resubmitted assignments will have an automatic 20% deduction from the final grade earned out of 100%.
- **Exclusions:** This policy does not apply to assignments in which the original grade was below 80% due to late submission penalties applied in accordance with the course's Late Policy.
- **Submission Deadline:** Resubmitted work must be submitted within 7 days of receiving the original grade and feedback, unless otherwise approved by the instructor.

Students are strongly encouraged to review instructor feedback carefully and consult with the instructor as needed before resubmitting work.

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, and missed clinical time is at the instructor's discretion.

Grading Criteria and Assignment Details: Detailed information, including grading rubrics, will be provided in Canvas.

Important Course Dates:

- Classes begin for 14-week session: 8/27/26
- Orientation: 9/1/26
- Census Date: 9/9/26
- Holidays: Labor Day (9/7/26), Thanksgiving (11/23-27/26)
- Last Date to Withdraw: 11/2/26

Last Day of Course: 12/12/26/26; please refer to the course schedule and Canvas for specific due dates.

Please note that all assignments must be submitted by 11:59 PM Central Time on the due date listed.

Calendar of Topics, Readings, and Due Dates: Details about readings and assignments will be provided in Canvas.

School of Nursing Policies and Additional Information:

https://www.uttyler.edu/nursing/college/student_guide_and_policies.php

Student Resources and University Policies are provided in Canvas (in the Syllabus Module).

NURS 7303 Course Calendar: Fall 2026

All times listed on the schedule and in Canvas are for Central Time and subject to change.

Week & Dates	Topics (with AACN Essentials)	Assignments Due
Week 1 (August 31 – Sept. 6)	Course Introduction; What Is Informatics? Course Expectations; Overview of DNP Informatics Leadership (Essentials: 5.1, 8.1)	Syllabus Review and Course Orientation Attestation – Due Sept 6 Introductory Post – Due Sept 6
Week 2 (Sept. 7-13)	What Is Informatics? DNP Role; Information & Communication Flow; Knowledge Structures (Essentials: 5.1, 7.1, 8.1)	Informatics in My Practice Reflection – Due Sept 13
Week 3 (Sept 14 - 20)	Data Types; Data Flow; Databases; Interoperability; USCDI (Essentials: 4.2, 5.1, 7.3, 8.1, 8.2)	Data Structures & Flow Mapping – Due Sept 20
Week 4 (Sept 21 -27)	Terminologies; Coding Systems; Semantic Interoperability; Mapping Meaning (Essentials: 4.2, 5.1, 7.3, 8.2)	Terminology & Semantic Mapping – Due Sept 27
Week 5 (Sept 28- Oct 4)	Descriptive Statistics Interpretation; Tables; Graphs; Rates; Trends (Essentials: 4.2, 5.1, 7.3, 8.2)	Data Interpretation Mini-Analysis – Due Oct 4
Week 6 (Oct 5 - 11)	Inferential Interpretation; p-values; CIs; Effect Sizes; Clinical Meaning (Essentials: 4.2, 5.1, 7.3, 8.2)	Major Project #1 – Due Oct 11
Week 7 (Oct 12 - 18)	Data Science; Predictive Analytics; Precision Health; Risk Stratification (Essentials: 5.2, 7.2, 8.2, 8.3)	Predictive Analytics Reflection – Due Oct 18
Week 8 (Oct 19 - 25)	Clinical Decision Support; Workflow; Triggers; Safety; Unintended Consequences (Essentials: 5.1, 7.1, 8.2, 8.3)	CDS Scenario Analysis Part 1 – Due Oct 25
Week 9 (Oct 26 – Nov 1)	AI & Machine Learning; Bias; Governance; Evaluation Frameworks (Essentials: 4.2, 5.2, 7.3, 8.3, 8.5)	CDS Scenario Analysis Part 2 – Due Nov 1

Week 10 (Nov 2 – 8)	Generative AI in Practice, Documentation & Workflow (Essentials: 5.1, 7.1, 7.2, 8.2)	Systems Improvement Proposal PART 1 – Problem Identification and Context Analysis Due Nov 8
Week 11 (Nov 9 - 15)	Human Factors; Usability; Technology-Induced Errors (Essentials: 5.1, 7.2, 7.3, 8.3)	Systems Improvement Proposal PART 2 – Data, Human Factors, and Technology Analysis Due Nov 15
Week 12 (Nov 16 – 22)	Telehealth: Virtual Nursing; Patient-Facing Technologies (Essentials: 5.2, 7.2, 8.3)	Systems Improvement Proposal PART 3 – Proposed Informatics Solution & Implementation Plan Due Nov 22
Thanksgiving Break (Nov 23 – 29)	Student Break	No Assignments Due
Week 13 (Nov 30 – Dec 6)	Privacy; Security; Policy; Ethical Implications of Digital Health (Essentials: 5.2, 7.2, 8.3, 8.5)	AIE: Systems Improvement Proposal PART 4 – Ethical, Policy, Security & Governance Analysis AND Final Submission of the Informatics Systems Improvement Proposal Due Dec 6
Week 14 (Dec 6 – 11)	The Future of Informatics and DNP Leadership (Essentials: 2.7, 5.1, 7.1, 7.2, 8.1-8.5)	Final Reflection: The Future of Informatics, Nursing, and DNP Leadership Due Wednesday, Dec 6