Table of Contents

Welcome to NURS 5324 - Health Care Informatics!

Welcome to Health Care Informatics! Did you know that informatics has been around since the 1800's? This is a true fact; Florence Nightingale, frequently termed and widely regarded as the "Mother of Modern Nursing," was one of the first nursing informaticist. She was always seeking better patient data to guide her work. And, data collection is the building block of informatics. The science and practice of nursing informatics integrates nursing with information and communication technologies to promote the health of people, families, and communities worldwide. In this course, you will learn various ways that informatics and technology supports health care professionals. Additionally, you will learn both the theoretical and practical issues, and, through discussion board postings, we will learn from each other as every nurse is an informaticist. The contributions of health informatics are bountiful. Health care informatics has the potential to reduce duplication, costs, and errors while improving communication between providers, integration of services, and patient safety.

The structure of this course has been arranged in **eight Modules**, located in the "**Course Modules**" tab in Blackboard. **Module 1** provides a foundation of health care informatics, examining the role of the health care professional as well as the historical perspective, and components of hardware and software. In **Module 2**, we will review the theoretical issues in health care informatics. **Module 3** will consist of two parts in which we will explore the Internet. In part I, will we review the history

and structure and in part 2, we will review the services and issues. **Module 4**, also has two parts, in both parts we will focus on informatics in health care education. In **Module 5,** we will review informatics in patient care settings. **Module 6** will seek to understand telemedicine and other health care applications. **Module 7** will focus on informatics and health care administration. Finally, in **Module 8**, we examine informatics and health care research. This is an exciting Module as we will review research as well as explore "Big Data!"

Introduction

Dr. Hermanns is a committed educator and researcher. Her research has focused on understanding the illness experience of persons with Parkinson's disease and their carepartners. Her program of research is expanding to include interventions to promote health in persons with chronic illness with an emphasis on those with Parkinson's disease. She also has additional research interests in informatics as well as implementation of innovative teachings strategies. Dr. Hermanns is excited to teach Health Care Informatics. She shares, there are so many novel ways we can use to educate and keep our patients informed and safe. With continual changes and emerging technologies, she looks forward to future advancements in health care. Stay tuned!

Your Faculty

Melinda Hermanns, PhD, RN, BC, CNE, PN/FCN
Office: BRB 2125
Office hours: Virtual Office Hours (email and/or conference call)
Phone: 903-566-7094
E-mail: mhermanns@uttyler.edu

COURSE SYLLABUS

NURS 5324 Health Care Informatics

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.

Course Credit and Clock Hours: 3 credit hours (3 clock hours per week)

Class Time: Internet class with no scheduled class meetings.

Placement in Curriculum: None

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 and information technologies.

Course Topics

- I. Introduction to Informatics
    - Role of the health care worker
    - Impact of informatics on professional practice
    - Components of hardware and software
- II. Theoretical Issues for Health Care Informatics
    - Theories
    - Standardized languages
- III. The Internet
    - Description
    - Structure
    - Portals
    - Security
    - Dashboard
    - Legal & ethical issues for health care professionals
- IV. Informatics in Health Care Education
    - QSEN competencies
    - TIGER initiative
    - Online instruction
    - Social networking
    - Simulation
    - Student counseling
- V. Informatics in Patient Care Settings
    - The EMR and the EHR
    - HHS meaningful use criteria
    - Next generation nursing systems
    - Health data storage and exchange
    - Telemedicine
    - Clinical imaging
    - Automated staffing and workload systems
    - Quality assurance
    - Social, ethical and legal issues
- VI. Informatics in Health Care Research

- o Data collection
  - ▪ 1. Qualitative: data bases
  - ▪ 2. Quantitative: lotus, spreadsheets
- o Data analysis--qualitative and quantitative
- o Data Presentation
- o Social, ethical and legal issues
- o Trends and directions for the future
- o Big Data
- • Future of Informatics

Required Texts

American Psychological Association. (2009). *Publication manual of the American Psychological*

Association. (6th ed.). Washington, D.C.: Author. ISBN: 1433805618

McGonigle, D., & Mastrian, K. G. (2015). *Nursing informatics and the foundation of knowledge*

(3rd edition). Burlington, MA: Jones & Bartlett. **ISBN: 978-1-284-04351-8**

Course Schedule

The course schedule, including assignment due dates and last day to withdraw without penalty, may be found in the course schedule link under the "Course Information" tab in Blackboard.

Grades and Grading

Specific guidelines and grading criteria are located in the **"Assignments"** tab. 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

Criteria for Evaluation:

o Five (5) Discussion Board Questions	25%
o Telemedicine Paper	25%
o Current Innovation Assignment	25%
o Big Data Paper (Summary & Reflection)	25%
Total:	100%

Assignments

Academic Integrity: Students are expected to assume full responsibility for the content and integrity of all academic work submitted. Refer to the ***Graduate Nursing Student Guide*** for policies regarding conduct and discipline.

Assignments Turn-In Process:

All assignments will be submitted through the "Assignments" tab in Blackboard unless otherwise indicated, such as the Discussion Board for the "Big Data" paper/article. Please use the following process to prepare and submit assignments:

- Prepare your assignment using Microsoft Word (unless otherwise directed – there is one assignment that you will create using Padlet). Name your assignment with the following convention: last name first initial, assignment title (ex. LastF_Assignmenttitle).
- Access the "Assignments" tab and click on the Assignment link in red font for your assignments.
- Number 1- shows the assignment instructions.
- Number 2- is where you add your comments and attach your completed assignment.
- Number 3 - when all attached files (your completed assignment files) are uploaded, click submit.

If you need more instructions on "how-to" submit files through the assignment link, please read the Blackboard Help for Students located in the Tools area.

Assignments are a major part of the course work and should receive appropriate attention. All assignments must meet the standards for graduate level work (spelling, punctuation, syntax, grammar, content, and most of all scholarliness). It is expected that all assignments will be completed in a **timely manner**, unless arrangements have been made by you and your faculty. Five (5) points will be deducted for each day an assignment is late.

- **Discussion Board:** There will be five (5) discussion board questions posted. Students are required to read all of the discussion board posts and reply to at least 2 students' postings. There will be an additional 3 non-graded, required discussion boards: 1) "Introductions,"
- 2) "Current Innovation" Assignment, and 3) "Telemedicine" Assignment. Instructions and grading criteria are posted in the "Assignments" tab.
- **Telemedicine Paper:** Identify a telemedicine application that interests you. Examples might include e-ICU, Criminal Justice System, telehealth system, or a home health monitoring device. Students will submit a 1-2 page typed paper summarizing the Telemedicine application. Instructions and grading criteria are posted in the "Assignments" tab.
- **Current Innovation Assignment:** Students will identify a health care technology that is currently used in the healthcare. Instructions and grading criteria are posted in the "Assignments" tab.
- **Big Data Paper:** 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." Lastly, upload both the paper and the article to the "Big Data" discussion board and submit via the "Assignments" tab. Please refer to the grading criteria posted in the "Assignments" tab,

***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.

All submitted written material (papers, assignments, examinations, etc.) are the property of the School of Nursing and will be maintained in an archived file at UT Tyler.

Participation Expectations and Discussion Board Assignments:

- Each student participant is responsible for participating in the asynchronous discussions for each discussion board post. This participation will include posting answers to questions posed by the instructor and replying to other participants' postings.
- Discussion postings should be made in a timely manner. Deadlines are listed in the Course Schedule. Please note that all discussion postings must be completed by midnight Central Standard Time on the due date.
- Participants should plan on entering the Discussion area at least three times a week in order to read and comment on others postings. Posting answers to the questions posed in the Discussion area should be done in advance of the deadline in order to allow other participants to have the opportunity to comment.

You may check your grades at any time on the Blackboard website. Feedback on assignments will be provided via the gradebook.

Email

All students are required to use their student **Patriot email accounts** for all correspondence (Approved FO: 2/03). To communicate by email within the course with other participants or all participants, click the Tools link on the left side of the Blackboard frame. Click Send E-mail to send a message. You are able to send messages to All Users or Select Users in the course, including the instructor. Faculty will not respond to personal email (e.g. Gmail, Yahoo, Hotmail, AOL, ATT accounts, etc.). Please comply with University Policy regarding electronic communication.

Your instructor's email is: mhermanns@uttyler.edu

Questions or problems other than technical problems may be submitted to the email address above. For technical issues, please refer to the Technical Information/Technical Support in this Syllabus.

I will make every effort to respond quickly to your emails. Generally speaking, I check email twice a day during the work week. I generally do not respond to weekend emails until Monday morning. Please note, there is one caveat: Technical problems in email systems may slow down responses. My priority is communicating with you, so if there are any problems, I will work to solve them.

Technical Information

The following information should be included in your syllabus to give direction to the students on how to obtain technical support should problems arise with Blackboard. Also included is a short list of browser plug-ins and other suggested applications that students should make sure they have installed and/or updated.

Technical Support

If you experience technical problems or have a technical question about this course, please consult Campus Computing Services via the web at http://www.uttyler.edu/ccs/help.php or via email at itsupport@patriots.uttyler.edu or phone 903.565.5555.

When you email IT Support, please be sure to include a complete description of your question or problem including:

- The title and number of the course.
- The page in question.
- If you get an error message, a description and message number.
- What you were doing at the time you got the error message.
- You may also visit the Help Tab in Blackboard for helpful information.

Plug-ins and Helper Applications

UT Tyler online courses use Java, JavaScript, browser plug-ins, helper application and cookies. It is essential that you have these elements installed and enabled in your web browser for optimal viewing of the content and functions of your online course.

- **Adobe Reader** allows you to view, save, and print Portable Document Format (PDF) files.
  http://get.adobe.com/reader/

- **Java Runtime Environment** (JRE) allows you to use interactive tools on the web.
  http://www.java.com/en/download/

- **Adobe Flash Player** allows you to view content created with Flash such as interactive web applications and animations.
  http://get.adobe.com/flashplayer/

- **Zoom** is a FREE cloud-based service that provides a simple solution for online meetings and video conferences. You can use Zoom to communicate with your instructor and classmates. Follow this link to set up your account: https://uttyler.zoom.us

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- **QuickTime** allows users to play back audio and video files. http://www.apple.com/quicktime/download/

- **Windows Media Player** allows you to view, listen and download streaming video and audio. http://windows.microsoft.com/en-US/windows/products/windows-media-player

- **RealPlayer** allows you to view and listen to streaming video and audio. http://www.real.com/

Netiquette Guide

"Netiquette" is network etiquette, the do's and don'ts of online communication. Netiquette covers both common courtesy online and informal "rules of the road" of cyberspace. Review and familiarize yourself with the guidelines provided.
http://www.learnthenet.com/learn-about/netiquette/index.php

https://www.uttyler.edu/online/files/netiquette.pdf

University Policies and Additional Information

The following course policies may be found at the website listed below: absence for religious observance, absence for university-supported trips, services to students with disabilities, grade replacement, state-mandated course drop policy, and Social Security and privacy.

http://uttyler.edu/academicaffairs/files/syllabuspolicies.pdf

UT Tyler Honor Code
Every member of the UT Tyler community joins together to embrace: Honor and integrity that will not allow me to lie, cheat, or steal, nor to accept the actions of those who do.

Students Rights and Responsibilities
To know and understand the policies that affect your rights and responsibilities as a student at UT Tyler, please follow this link: http://www.uttyler.edu/wellness/rightsresponsibilities.php

Campus Carry
We respect the right and privacy of students 21 and over 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

UT Tyler a Tobacco-Free University
All forms of tobacco will not be permitted on the UT Tyler main campus, branch campuses, and any property owned by UT Tyler. This applies to all members of the University community, including students, faculty, staff, University affiliates, contractors, and visitors.

Forms of tobacco not permitted include cigarettes, cigars, pipes, water pipes (hookah), bidis, kreteks, electronic cigarettes, smokeless tobacco, snuff, chewing tobacco, and all other tobacco products.

There are several cessation programs available to students looking to quit smoking, including counseling, quitlines, and group support. For more information on cessation programs please visit www.uttyler.edu/tobacco-free.

Grade Replacement/Forgiveness and Census Date Policies
Students repeating a course for grade forgiveness (grade replacement) must file a Grade Replacement Contract with the Enrollment Services Center (ADM 230) on or before the Census Date of the semester in which the course will be repeated. (For Fall 2016, the Census Date is Sept. 12.) Grade Replacement Contracts are available in the Enrollment Services Center or at http://www.uttyler.edu/registrar. Each semester's Census Date can be found on the Contract itself, on the Academic Calendar, or in the information pamphlets published each semester by the Office of the Registrar.

Failure to file a Grade Replacement Contract will result in both the original and repeated grade being used to calculate your overall grade point average. Undergraduates are eligible to exercise grade replacement for only three course repeats during their career at UT Tyler; graduates are eligible for two grade replacements. Full policy details are printed on each Grade Replacement Contract.

The Census Date (Sept. 12th) is the deadline for many forms and enrollment actions of which students need to be aware. These include:
- Submitting Grade Replacement Contracts, Transient Forms, requests to withhold directory information, approvals for taking courses as Audit, Pass/Fail or Credit/No Credit.
- Receiving 100% refunds for partial withdrawals. (There is no refund for these after the Census Date).
- Schedule adjustments (section changes, adding a new class, dropping without a "W" grade)
- Being reinstated or re-enrolled in classes after being dropped for non-payment.
- Completing the process for tuition exemptions or waivers through Financial Aid.

State-Mandated Course Drop Policy
Texas law prohibits a student 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 another 2-year or 4-year Texas public college or university. For purposes of this rule, a dropped course is any course that is dropped after the census date (See Academic Calendar for the specific date).

Exceptions to the 6-drop rule may be found in the catalog. Petitions for exemptions must be submitted to the Enrollment Services Center and must be accompanied by documentation of the extenuating circumstance. Please contact the Enrollment Services Center if you have any questions.

Student Accessibility and Resources
In accordance with Section 504 of the Rehabilitation Act, Americans with Disabilities Act (ADA) and the ADA Amendments Act (ADAAA) the University offers accommodations to students with learning, physical and/or psychiatric disabilities. If you have a disability, including non-visible disabilities such as chronic diseases, learning disabilities, head injury, PTSD or ADHD, or you have a history of modifications or accommodations in a previous educational environment you are encouraged to contact the Student Accessibility and Resources (SAR) office and schedule an interview with the Accessibility Case Manager/ADA Coordinator, Cynthia Lowery Staples. If you are unsure if the above criteria applies to you, but have questions or concerns please contact the SAR office. For more information or to set up an appointment please visit the SAR office located in the University Center, Room 3150 or call 903.566.7079. You may also send an email to cstaples@uttyler.edu

Student Absence due to Religious Observance
Students who anticipate being absent from class due to a religious observance are requested to inform the instructor of such absences by the second class meeting of the semester.

Student Absence for University-Sponsored Events and Activities
If you intend to be absent for a university-sponsored event or activity, you (or the event sponsor) must notify the instructor at least two weeks prior to the date of the planned absence. At that time the instructor will set a date and time when make-up assignments will be completed.

Social Security and FERPA Statement
It is the policy of The University of Texas at Tyler to protect the confidential nature of social security numbers. The University has changed its computer programming so that all students have an identification number. The electronic transmission of grades (e.g., via e-mail) risks violation of the Family Educational Rights and Privacy Act; grades will not be transmitted electronically.

Emergency Exits and Evacuation
Everyone is required to exit the building when a fire alarm goes off. Follow your instructor's directions regarding the appropriate exit. If you require assistance during an evacuation, inform your instructor in the first week of class. Do not re-enter the building unless given permission by University Police, Fire department, or Fire Prevention Services.

Student Standards of Academic Conduct
Disciplinary proceedings may be initiated against any student who engages in scholastic dishonesty, including, but not limited to, cheating, plagiarism, collusion, the submission for credit of any work or materials that are attributable in whole or in part to another person, taking an examination for another person, any act designed to give unfair advantage to a student or the attempt to commit such acts.
  i. "Cheating" includes, but is not limited to:
    - copying from another student's test paper;

- using, during a test, materials not authorized by the person giving the test;
- failure to comply with instructions given by the person administering the test;
- possession during a test of materials which are not authorized by the person giving the test, such as class notes or specifically designed "crib notes". The presence of textbooks constitutes a violation if they have been specifically prohibited by the person administering the test;

• using, buying, stealing, transporting, or soliciting in whole or part the contents of an unadministered test, test key, homework solution, or computer program;

• collaborating with or seeking aid from another student during a test or other assignment without authority;

• discussing the contents of an examination with another student who will take the examination;

• divulging the contents of an examination, for the purpose of preserving questions for use by another, when the instructors has designated that the examination is not to be removed from the examination room or not to be returned or to be kept by the student;

• substituting for another person, or permitting another person to substitute for oneself to take a course, a test, or any course-related assignment;

• paying or offering money or other valuable thing to, or coercing another person to obtain an unadministered test, test key, homework solution, or computer program or information about an unadministered test, test key, home solution or computer program;

• falsifying research data, laboratory reports, and/or other academic work offered for credit;

• taking, keeping, misplacing, or damaging the property of The University of Texas at Tyler, or of another, if the student knows or reasonably should know that an unfair academic advantage would be gained by such conduct; and

• misrepresenting facts, including providing false grades or resumes, for the purpose of obtaining an academic or financial benefit or injuring another student academically or financially

ii. "Plagiarism" includes, but is not limited to, the appropriation, buying, receiving as a gift, or obtaining by any means another's work and the submission of it as one's own academic work offered for credit.

iii. "Collusion" includes, but is not limited to, the unauthorized collaboration with another person in preparing academic assignments offered for credit or collaboration with another person to commit a violation of any section of the rules on scholastic dishonesty.

iv. All written work that is submitted will be subject to review by SafeAssignTM, available on Blackboard.

UT Tyler Resources for Students
- UT Tyler Writing Center (903.565.5995), writingcenter@uttyler.edu
- UT Tyler Tutoring Center (903.565.5964), tutoring@uttyler.edu
- The Mathematics Learning Center, RBN 4021, this is the open access computer lab for math students, with tutors on duty to assist students who are enrolled in early-career courses.
- UT Tyler Counseling Center (903.566.7254)

- [UT Tyler Muntz Library](#) (903 566-7343), Library Liaison for Nursing, Suzanne Abbey (903.566.7165) email: sabbey@uttyler.edu

Revised 09/16

Graduate students in clinical – the UT Tyler patch is to be worn on the on the front left pocket area of the lab coat.

Course Evaluation

UT Tyler may ask you to complete a voluntary evaluation to help them make improvements and adjustments in their overall online learning forums.

Also, an end of semester evaluation specifically for this course will be made available for you to complete in the last week of instruction. Your comments and recommendations will be considered seriously as the course is updated. Your input throughout the semester contributes to our commitment to improve continually the quality and relevance of this course.

Completion Time

You should expect to spend as much time on an online course as you do in a face-to-face course. As a rough guide, you should plan to spend six to ten hours per week on this course. The actual amount of time will vary from individual to individual. This estimate includes the time you spend in reading, discussions, and assignments.

You will have access to most of the course materials from the start of the course to the end. You may look and study ahead, or go back and review, at any time during the course. All assignments have set due dates. **Due dates are as of midnight Central Standard Time on that date**.

Getting Started

Please refer to the information contained in this Syllabus anytime you have a question regarding the basic course information. After you have read the information posted in the "Course Information" tab, you may begin clicking on the Modules button in the left-hand navigation bar, and then choose Module 1.

Epilogue from Dr. Hermanns

This course is a fun course. It's fun because you will have the opportunity to explore exciting, novel, and innovative technologies used in today's health care arena. You will no doubt learn a vast amount of information. We are going have a wonderful and productive semester. Welcome to the course!

All My Best,
Dr. Hermanns

*The content of this syllabus or web-based course is subject to change at the discretion of the faculty according to current learning needs.