



COURSE NUMBER 6316

COURSE Informatics and Healthcare Technology

Spring SEMESTER 2022

Course Information

Course Description

This course integrates computer, information, and nursing sciences in tandem with healthcare and communication technologies to deliver, integrate, and coordinate nursing care. Students demonstrate meaningful use of technology by analyzing and ethically managing aggregate data to guide decisions and improve outcomes. Using information systems, emerging technologies, and electronic health records, students will develop an evidence-based informatics project to inform or influence care.

Course Credits

Three semester credit hours (3-0-0)

This course meets completely online using Blackboard as the delivery method.

Prerequisite and Co-requisite Courses

None

Prerequisite Skills

Accessing internet web sites, use of ASU Library resources, and proficiency with Microsoft Word and/or PowerPoint are an expectation of on-line course delivery. Computer access requirements are further delineated in the Graduate Handbook. Tutorials for ASU Library and for Blackboard are available through Ram Port. The ASU Graduate Nursing Handbook should be reviewed before taking this course.

MSN Program Outcomes

Upon completion of the program of study for the graduate will be prepared to:

1. Integrate nursing and related sciences into the delivery of advanced nursing care to diverse populations.
2. Apply organizational and systems leadership skills.
3. Design and implement quality improvement initiatives
4. Integrate best research evidence to improve health outcomes.
5. Utilize informatics, healthcare technology and information systems.
6. Advocate through system level policy development.
7. Employ effective communication in inter-professional teams
8. Synthesize the impact of health determinants for provision of culturally relevant health promotion/disease prevention strategies.
9. Practice at the level of a Master's prepared nurse.

Student Learning Outcomes

Student Learning Outcome By completing all course requirements, students will be able to:	Assignment(s) or activity(ies) validating outcome achievement:	Mapping to MSN Program Outcomes	Mapping to MSN Essentials Domains	Mapping to QSEN Competencies
Apply theory related to computer-human interfaces, ethics, confidentiality and privacy, caring, and nursing informatics to nursing education, research or nursing practice.	<ul style="list-style-type: none"> • Discussion Boards • Formal paper/presentation • Course textbook readings • Peer/Self Evaluations 	5,9	1,2,4,5, 6, 7, 8, 9,10	1,6
Utilize computer technology and outcome data for documentation, communication, client education, professional development and networking.	<ul style="list-style-type: none"> • Discussion Boards • Formal paper/presentation • Course textbook readings • Peer/Self Evaluations 	5,9	1,2,4,5, 6, 7, 8, 9,10	1,2,6

Student Learning Outcome By completing all course requirements, students will be able to:	Assignment(s) or activity(ies) validating outcome achievement:	Mapping to MSN Program Outcomes	Mapping to MSN Essentials Domains	Mapping to QSEN Competencies
Explore the use of online environments for instruction, content sharing, commerce, and the provision of health-related services	<ul style="list-style-type: none"> • Discussion Boards • Formal paper/presentation • Course textbook readings • Peer/Self Evaluations 	4,5	1,2,4,5, 6, 7, 8, 9,10	3,4,5,6
Discuss and use principles of usability, learnability, memorability, likeability, readability and aesthetics in the context of nursing informatics in education and practice.	<ul style="list-style-type: none"> • Discussion Boards • Formal paper/presentation • Course textbook readings • Peer/Self Evaluations 	5	1,2,4,5, 6, 7, 8, 9,10	1,3
Identify best evidence and practices for the application of information and communication technologies to support education and patient care.	<ul style="list-style-type: none"> • Discussion Boards • Formal paper/presentation • Course textbook readings • Peer/Self Evaluations 	5	1,2,4,5, 6, 7, 8, 9,10	2,6
Utilize current and emerging technologies in the care environment to support lifelong learning for self and others.	<ul style="list-style-type: none"> • Discussion Boards • Formal paper/presentation • Course text readings • Peer/Self Evaluations 	5,9	1,2,4,5, 6, 7, 8, 9,10	1,3,4,6

Course Delivery

This is an online course offering. The course will be delivered via the Blackboard Learning Management System. The course site can be accessed at [ASU's Blackboard Learning Management System](#)

Required Texts and Materials

McBride & Tietze (2019). *Nursing Informatics for the Advanced Practice Nurse: Patient Safety, Quality, Outcomes, and Inter-professionalism (2nd ed.)*. Springer Publishers. ISBN 978-0-8261-1-4045-6.

Recommended Texts and Materials

American Psychological Association. (2020). *Publication manual of the American Psychological Association (7th ed.)*. American Psychological Association. ISBN 978-1-4338-3217-8.

Technology Requirements

To participate in one of ASU's distance education programs, you need this technology:

- A computer capable of running Windows 7 or later, or Mac OSX 10.8 or later
- The latest version of one of these web browsers: internet Explorer, Firefox, or Safari
- Microsoft Office Suite or a compatible Open Office Suite
- Adobe Acrobat Reader
- High Speed Internet Access
- Ethernet adapter cable required (wireless connections can drop during tests and Collaborate sessions)
- Webcam

Refer to Angelo State University's Distance Education website for further technology requirements: [Angelo State University's Distance Education Website](#)

Topic Outline

Unit 1 Introduction to Health Information Technology and Advanced Practice Roles in Inter-professional Teams

Unit 2 Point-of-Care Technology; Telehealth

Unit 3 Data Management

Unit 4 Patient Safety, Quality and Population Health

Unit 5 New and Emerging Technologies

Time Zone

ASU and this faculty are on Central Standard Time (CST). All due dates and times in this syllabus are CST.

Communication

Faculty will respond to email and/or telephone messages within 24 hours during working hours Monday through Friday. Weekend messages may not be returned until Monday.

Written communication via email: All private communication will be done exclusively through your ASU email address. Check frequently for announcements and policy changes. In your emails to faculty, include the course name and section number in your subject line.

Virtual communication: Office hours and/or advising may be done with the assistance of the telephone and email, etc.

Use Good "Netiquette":

The online setting of our course promotes the advancement of knowledge through positive and constructive discussion. Professional netiquette should be used when communicating with students and faculty online, including discussions and emails. Basic academic rules of good behavior and proper "Netiquette" are required and must prevail. Students should be timely in their online communication and should ensure to post discussion responses and replies on time. Students should not discuss confidential information in discussion responses and replies. The absence of face-to-face interaction increases the likelihood of misinterpretation. Avoid using offensive language, excessive exclamation points, all caps, humor and sarcasm, acronyms, emojis, and slang. Watch your "tone" - it can be very easy to misinterpret someone's meaning online. Never write anything that you would not want posted on the wall of a face-to-face classroom. Recognize and value the experiences, abilities, and knowledge each person brings to class. Remember that there is a real live person to be treated with respect at the other end reading your posts and emails. If you disagree with ideas, state opposing argument in a diplomatic and respectful manner. Think about what you have written before you submit it. Be concise, use appropriate formatting, proofread and spell check your message.

Grading

Evaluation and Grades

Course grades will be determined as indicated in the table below. To demonstrate competency in Informatics, all work related to this informatics course must reach the threshold of 70%.

Assessment/Points of Total Grade	Percentage of Final Grade
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Discussion Board Forums (worth 100 points each– 5% each) 800 points total	25%
Systematic Review project	75%
	Systematic Review project paper 100 points
	Systematic Review project poster 100 points
	Systematic Review Problem Statement/Intro section 15 points
	Systematic Review Methods section 10 points
	Systematic Review Review of Literature section 40 points
	Systematic Review Conclusion section 10 points
Total 1075 points	100%
Bonus Points	
Presentation at ASU Graduate Symposium	10 points
Course Surveys (Midterm 2 points & Final Course IDEA Survey 3 points)	5 points

Grading System

Course grades will be dependent upon completing course requirements and meeting the student learning outcomes.

The following grading scale is in use for this course:

- A = 90.00-100 points
- B = 80.00-89.99 points
- C = 70.00-79.99 points
- D = 60.00-69.99 points
- F = 0-59.99 points (Grades are not rounded up)

Teaching Strategies

Students are expected to be “active learners.” It is a basic assumption of the instructor that students will be involved (**beyond the materials and lectures presented in the course**) discovering, processing, and applying the course information using peer-review journal articles, researching additional information and examples on the Internet, and discussing course material and clinical experiences with their peers.

Assignment and Activity Descriptions

To demonstrate competency in Informatics, the student must utilize appropriate terminology related to informatics in nursing 100% of the time in the research paper, online discussions, and quizzes. After completion of course assignments, the student will demonstrate competency in the AACN Essentials Informatics subcompetencies for Advanced Nursing education:

- 8.1g Identify best evidence and practices for the application of information and communication technologies to support care.
- 8.1h Evaluate the unintended consequences of information and communication technologies on care processes, communications, and information flow across care settings.
- 8.1i Propose a plan to influence the selection and implementation of new information and communication technologies.
- 8.1j Explore the fiscal impact of information and communication technologies on health care.
- 8.1k Identify the impact of information and communication technologies on workflow processes and healthcare outcomes.
- 8.2f Generate information and knowledge from health information technology databases.
- 8.2g Evaluate the use of communication technology to improve consumer health information literacy.
- 8.2h Use standardized data to evaluate decision-making and outcomes across all systems levels.
- 8.2i Clarify how the collection of standardized data advances the practice, understanding, and value of nursing and supports care.
- 8.2j Interpret primary and secondary data and other information to support care.
- 8.3g Evaluate the use of information and communication technology to address needs, gaps, and inefficiencies in care.
- 8.3h Formulate a plan to influence decision-making processes for selecting, implementing, and evaluating support tools.
- 8.3i Appraise the role of information and communication technologies in engaging the patient and supporting the nurse-patient relationship.
- 8.3j Evaluate the potential uses and impact of emerging technologies in health care.
- 8.3k Pose strategies to reduce inequities in digital access to data and information.
- 8.4e Assess best practices for the use of advanced information and communication technologies to support patient and team communications.
- 8.4f Employ electronic health, mobile health, and telehealth systems to enable quality, ethical, and efficient patient care.
- 8.4g Evaluate the impact of health information exchange, interoperability, and integration to support patient-centered care.
- 8.5g Apply risk mitigation and security strategies to reduce misuse of information and communication technology.
- 8.5h Assess potential ethical and legal issues associated with the use of information and communication technology.
- 8.5i Recommend strategies to protect health information when using communication and information technology.
- 8.5j Promote patient engagement with their personal health data.
- 8.5k Advocate for policies and regulations that support the appropriate use of technologies impacting health care.
- 8.5l Analyze the impact of federal and state policies and regulation on health data and technology in care settings.

Discussion Board Activities: Discussion Boards provide an avenue for synthesis of material / information. A Discussion Board is provided in this course as a way to help students' process course materials, express thoughts, and engage others opinions and ideas in a healthy and productive learning environment. Discussion Boards allow for deeper discussions and more

applications to real world experiences. The opportunity of having both NP and ED students in this class allows the student to hear different perspectives on the same discussion board topics giving a broader understanding of the role of Informatics in healthcare as it relates to both nursing education and nursing practice.

There is an “Introduce yourself” discussion board in Week 1 that is non-graded. There are an additional 7 graded discussion boards in this course. A portion of your course grade (25%) is based on your participation in discussions with your classmates and instructor. The DB guidelines and grading rubric, found on BlackBoard, are intended to help you achieve the grade you desire for the discussion board portion of your course grade. Students are expected to respond to all discussion board assessments using the “**Online Discussion Rubric**” to support individual answers to the assigned questions throughout this course.

Discussion Board posts should demonstrate substance and contribute to the understanding and application of ideas by:

Reflection about meaning: Describes thoughtfully what something means or new insight it provides, or raises a question as a seed for clarification or further discussion.

Analysis: Discuss relevant themes, concepts, main ideas, components or relationships among ideas. Or, identify hidden assumptions or fallacies in reasoning.

Elaboration: Builds on ideas of others found in the readings by adding details, examples, a different viewpoint, or other relevant information and references.

Application: Provides examples of how principles or concepts can be applied to actual situations, or discusses the implications of theory for practice.

Synthesis: Integrates multiple views to provide a summary, a new perspective, or a creative refashioning of ideas.

Evaluation: Assess the accuracy, reasonableness, or quality of ideas.

Systematic Review Informatics Research Competency paper and presentation: The systematic review research project provides the opportunity to explore an Informatics topic in-depth with a focus on application of Informatics in the role(s) of an advanced practice nurse, demonstrating competency in Informatics. This is a group learning activity culminating in a formal paper and poster presentation at the ASU Graduate Symposium to be held on the date noted on your course calendar. Sections of your paper/presentation will be submitted throughout the semester (See Course Calendar for due dates of sections) to allow you to receive feedback from your Instructor as you develop your primary focus regarding your selected topic. You are expected to utilize the PRISMA checklist and to carefully review and use the Rubric (found in Course Documents in the Blackboard course). Completing all the necessary items will provide a pathway to demonstrating competency in the AACN Informatics Essentials and to achieve the grade you desire on this assignment.

Assignment Submission

All assignments MUST be submitted through the Assignments link in the Blackboard site. This is for grading, documenting, and archiving purposes. Issues with technology use arise from time to time. If a technology issue does occur regarding an assignment submission, email me at wrennah.gabbert@angelo.edu and attach a copy of what you are trying to submit. Please contact the IT Service Center at (325) 942-2911 or go to your Technology Support tab to report the issue. Be sure to keep a backup of all work. As with all assignments, be sure to “Save” your work frequently and keep a backup of all your hard work. All due dates/times are Central Standard Time (CST) and are listed on the Course Schedule.

Late Work or Missed Assignments Policy

Late Work Policy

The course is set up on weekly modules. The week begins on Monday and ends on Sunday. Assignment due dates are shown on the course calendar posted in Course Documents within Blackboard. Late assignments are not accepted without prior approval of faculty. If you experience extenuating circumstances hindering your submission of your assignment on time, please contact your course Faculty immediately. Failure to submit your assessments/assignments on the assigned date, except in the case of an emergency situation or personal misfortune and/or without prior approval by course faculty, will result in a grade of zero (0). Faculty reserve the right to deduct points for late assignments that are accepted past the original due date.

General Policies Related to This Course

All students are required to follow the policies and procedures presented in these documents:

- [Angelo State University Student Handbook](#)¹
- [Angelo State University Catalog](#)²

Student Responsibility and Attendance

Online: This class is asynchronous, meaning you do not have to be on-line at a certain time. There are readings which you will have to complete to be able to adequately participate in individual and group assignments. In order to complete this course successfully, you do have to participate in all course activities i.e. discussion boards, course projects, reflective logs, etc. Students are expected to engage in course activities and submit work by due dates and times. The hope is that students will make substantive contributions which reflect integration of assigned materials as well as any outside readings as appropriate. Scholarly contribution is an

expectation. For planning purposes, this class will probably require a minimum of 6-9 study hours per week on average.

Academic Integrity

Students are expected to maintain complete honesty and integrity in all work. Any student found guilty of any form of dishonesty in academic work is subject of disciplinary action and possible expulsion from ASU.

The College of Health and Human Services adheres to the university's [Statement of Academic Integrity](#).³

Accommodations for Students with Disabilities

ASU is committed to the principle that no qualified individual with a disability shall, on the basis of disability, be excluded from participation in or be denied the benefits of the services, programs or activities of the university, or be subjected to discrimination by the university, as provided by the Americans with Disabilities Act of 1990 (ADA), the Americans with Disabilities Act Amendments of 2008 (ADAAA) and subsequent legislation.

Student Disability Services is located in the Office of Student Affairs, and is the designated campus department charged with the responsibility of reviewing and authorizing requests for reasonable accommodations based on a disability. It is the student's responsibility to initiate such a request by contacting an employee of the Office of Student Affairs, in the Houston Harte University Center, Room 112, or contacting the department via email at ADA@angelo.edu. For more information about the application process and requirements, visit the [Student Disability Services website](#).⁴ The employee charged with the responsibility of reviewing and authorizing accommodation requests is:

Dallas Swafford
Director of Student Disability Services
Office of Student Affairs
325-942-2047
dallas.swafford@angelo.edu
Houston Harte University Center, Room 112

Incomplete Grade Policy

It is policy that incomplete grades be reserved for student illness or personal misfortune. Please contact faculty if you have serious illness or a personal misfortune that would keep you from

completing course work. Documentation may be required. See ASU Operating Policy 10.11 [Grading Procedures](#)⁵ for more information.

Plagiarism

Plagiarism is a serious topic covered in ASU's [Academic Integrity policy](#)⁶ in the Student Handbook. Plagiarism is the action or practice of taking someone else's work, idea, etc., and passing it off as one's own. Plagiarism is literary theft.

In your discussions and/or your papers, it is unacceptable to copy word-for-word without quotation marks and the source of the quotation. It is expected that you will summarize or paraphrase ideas giving appropriate credit to the source both in the body of your paper and the reference list.

Papers are subject to be evaluated for originality. Resources to help you understand this policy better are available at the [ASU Writing Center](#).⁷

Student Absence for Observance of Religious Holy Days

A student who intends to observe a religious holy day should make that intention known in writing to the instructor prior to the absence. See ASU Operating Policy 10.19 Student Absence for [Observance of Religious Holy Day](#)⁸ for more information.

Copyright Policy

Students officially enrolled in this course should make only one printed copy of the given articles and/or chapters. You are expressly prohibited from distributing or reproducing any portion of course readings in printed or electronic form without written permission from the copyright holders or publishers.

Syllabus Changes

The faculty member reserves the option to make changes as necessary to this syllabus and the course content. If changes become necessary during this course, the faculty will notify students of such changes by email, course announcements and/or via a discussion board announcement. It is the student's responsibility to look for such communications about the course on a daily basis.

Title IX at Angelo State University

Angelo State University is committed to providing and strengthening an educational, working, and living environment where students, faculty, staff, and visitors are free from sex discrimination of any kind. In accordance with Title VII, Title IX, the Violence Against Women Act (VAWA), the Campus Sexual Violence Elimination Act (SaVE), and other federal and state laws, the University prohibits discrimination based on sex, which includes pregnancy, and other

types of Sexual Misconduct. Sexual Misconduct is a broad term encompassing all forms of gender-based harassment or discrimination and unwelcome behavior of a sexual nature. The term includes sexual harassment, nonconsensual sexual contact, nonconsensual sexual intercourse, sexual assault, sexual exploitation, stalking, public indecency, interpersonal violence (domestic violence or dating violence), sexual violence, and any other misconduct based on sex.

You are encouraged to report any incidents involving sexual misconduct to the Office of Title IX Compliance and the Director of Title IX Compliance/Title IX Coordinator, Michelle Boone, J.D. You may submit reports in the following manner:

Online: www.angelo.edu/incident-form

Face to face: Mayer Administration Building, Room 210

Phone: 325-942-2022

Email: michelle.boone@angelo.edu

Note, as a faculty member at Angelo State, I am a mandatory reporter and must report incidents involving sexual misconduct to the Title IX Coordinator. Should you wish to speak to someone in confidence about an issue, you may contact the University Counseling Center (325-942-2371), the 24-Hour Crisis Helpline (325-486-6345), or the University Health Clinic (325-942-2171).

For more information about resources related to sexual misconduct, Title IX, or Angelo State's policy please visit: www.angelo.edu/title-ix.

Grading Rubrics

Grading rubrics will be included in assignment instructions inside of the Blackboard Learning Management System.

Student Evaluation of Faculty and Course

Students in all programs are given the opportunity to evaluate their courses and the faculty who teach them. Evaluations are most helpful when they are honest, fair, constructive, and pertinent to the class, clinical experience, or course. Faculty value student evaluations, and use student suggestions in making modifications in courses, labs and clinical experiences.

Angelo State University uses the IDEA (Individual Development and Educational Assessment) system administered through Kansas State University for all course evaluations. The Office of

Institutional Research and Assessment administers IDEA for the entire university, online and has established a policy whereby students can complete course evaluations free from coercion.

Student Learning Objectives for Course Evaluation Surveys

1. Gaining a basic understanding of the subject (e.g., factual knowledge, methods, principles, generalizations, theories)
2. Learning to apply course material (to improve thinking, problem solving, and decisions)
3. Developing specific skills, competencies, and points of view needed by professionals in the field most closely related to this course

¹ <https://www.angelo.edu/student-handbook/>

² <https://www.angelo.edu/catalogs/>

³ <https://www.angelo.edu/student-handbook/community-policies/academic-integrity.php>

⁴ <https://www.angelo.edu/services/disability-services/>

⁵ <https://www.angelo.edu/content/files/14197-op-1011-grading-procedures>

⁶ <https://www.angelo.edu/student-handbook/community-policies/academic-integrity.php>

⁷ https://www.angelo.edu/dept/writing_center/academic_honesty.php

⁸ <https://www.angelo.edu/content/files/14206-op-1019-student-absence-for-observance-of>

End of Syllabus