Computer Applications in Health Care
Clemson University, School of Nursing

COURSE:	NURS 1400 (Section 003)	**TERM:**	Spring 2021
LOCATION:	Watt Room 208, Thursday 5-7:30 PM		
PROF:	Jason Thrift, MS, RN	**PHONE:**	864-940-8536
OFFICE:	409 Edwards Hall	**OFFICE HRS:**	Thursday 2-4 PM
EMAIL:	jasont@clemson.edu	**Requisites**:	None
Credits:	3 credits (3, 0)	**Placement:**	Freshman
Intern:	Mary Jones, CUSN	**Email:**	mnj2@g.clemson.edu
	Brent Harwell, CUSN		bvharwe@g.clemson.edu

Catalog Description:

This course is designed to introduce students to nursing and the application of computer technology in the delivery of health care. The course will cover existing computer health care applications, emerging trends and forecast future needs. Social and ethical issues related to technology will be discussed.

Clemson Thinks2:

This course is a part of the Clemson Thinks2 (CT2) Quality Enhancement Plan that focuses on undergraduate critical thinking, a skill that is vital to your success in college and after graduation. The CT2 initiative at Clemson is part of the university's strategic plan to become a top-20 University in part by promoting engaged learning environments that promote critical thinking skills among students throughout their 4-year Clemson Experience. Critical thinking is a core competency for BSN graduates. Upon graduation, baccalaureate-prepared nursing students should question, analyze, interpret, infer, apply, and use inductive and deductive reasoning, as well as intuition and creativity in their nursing practice (American Association of College of Nursing, Essentials of Baccalaureate Education for Professional Nursing Practice, 2008).

This course has been designed to provide freshman & sophomore level students with opportunities to enhance critical thinking skills that will prepare them to engage in higher-level informed thinking in the classroom, the community and their future careers. To assess the students' progress in critical thinking skills, students will take the California Critical Thinking Skills Test (CCTST) at the beginning and end of the semester. Many of the course assignments are designed to enhance critical thinking skills, such as analyzing, inferring, evaluating, deducing, and critiquing. The primary goals of this CT2 seminar include developing students who can:

1. Develop university-level competencies that characterize critical thinking
2. Describe and reflect on specific activities that characterize critical thinking
3. Apply critical thinking skills to problem-solving situations related to the patients and patient care.

Course Objectives:

1. Describe concepts relevant to the profession of nursing and information technology in health care.
2. Apply information technologies to the intellectual and professional development of health care delivery.
3. Demonstrate an understanding of the role of science and technology in society including information ethics and societal issues.
4. Explore recent innovations, emerging trends and forecast future needs related to the use of technology in health care.
5. Identify current informatics research issues and opportunities.

CT2 Course Student Learning Outcomes:

Upon successful completion of the course, students will demonstrate the ability to:
1. Explore and describe complex challenges associated with new healthcare technologies [Nursing Innovation*, Critical Thinking Paper*].
2. Learn to assess the reliability of healthcare information on the Internet and assist patient to make well-informed choices about where to find reliable information [Digital Patient Engagement*].
3. Identify a patient problem/issue, determine a solution to this patient problem, and create a 3D printed prototype depicting your solution. Evaluate your solution including its strengths and weaknesses. Develop an argument to support your prototype [Makerspace Activity*].
4. Reflect on the strengths and weaknesses of yourself and your team members and suggest ways in which you and others could improve the future work of the team [Makerspace Activity*]

*These are CT2 artifacts.

Teaching/Learning Strategies:

Software Applications	Discussions (Online & In Class)
Demonstrations	On-line Activities
In-class Exercises	Project Presentations

Evaluation Methods:

A passing course grades requires a minimum numerical grade of 75 in the course. A passing grade is the weighted average of Critical Thinking (CT2) paper, Makerspace Activity, class activities, Midterm examination, CCTST, and Final examination.

Students who do not complete a class activity or who fail to meet the deadlines for a class activity will receive an incomplete (0 points) on the activity. Class activities that are completed and submitted by the due date will be graded and will account for 10% of the total grade. **If a student has 3 or more late or incomplete activities, the student will automatically receive a zero (0) for the entire 10% of the class activities grade.**

Nursing Innovation Project [3 Milestones]
- M01: Interview   7%
- M02: CT2 Paper   20%
            Draft 3%
            Final 17%
- M03: Makespace Activity   20%

Class Activities   10%
Midterm Exam   20%
Final Exam   20%
CCTST   3%

Nursing Innovation Project

The purpose of the Nursing Innovation Project is to develop prototypes for possible solutions to "real" healthcare problems. This project should help nursing students create health technologies allowing them to engage in the design and development of healthcare devices.

This Nursing Innovation Project is based on ideas talked about in The Future of Nursing IOM Report (2010). This report calls on nurses to do more than just talk about new ideas for improving health and health care. It states that nurses need to be able to turn their ideas into a product that they can hold in their hands. It is a requirement that your final Nursing Innovation Project must be showcased at Makerday [TBA].

Milestone 01: The Interview

Interview a healthcare provider, a patient and/or care provider. Also, feel free to use your resources, faculty, and older nursing students if needed. Identify a "real" problem in the delivery of healthcare and create a prototype to improve the problem in a Healthcare Makerspace. The interview counts as 7% of your final grade. The topic you choose needs to be one that can be researched for:

Identify the interviewee: (20%)
- How do you know this individual?
- Where does this individual work? (Be specific)
- What area does this individual work in? (PICU, L&D, etc.)
- Years out of school?

Clearly define the problem: (40%)
- What is the problem?
- Why is this a problem?
- How is the problem handled today?
- Identify multiple present-day solutions.

Identify the healthcare setting: (20%)
- Hospitals
- Public health centers

- Schools
- Homes

Identify the area your project will address: (20%)
- Direct patient care
- Health promotion
- Patient education
- Coordination of care

Milestone 02: The Critical Thinking [CT2] Paper:

Write a critical thinking paper about the healthcare problem identified in Milestone 01. Conduct a computer library search to find recent (2015-2020) articles concerning the healthcare problem. Make sure the research includes both the pros and cons on patient care. Write a critical thinking paper using APA format. Make sure you include a Peer Evaluation for each member of your group. [Draft counts 15% of total paper grade. Therefore, 15% draft + 85% final = CT2 paper grade].

Milestone 03: The Makerspace Activity:

This Makerspace Activity will be a collaborative between the Clemson University School of Nursing, The HIVE: Health InnoVation Exchange] and the Clemson Makerspace. Each student will complete training to using the Clemson Makerspace. Then groups will create a prototype project [include 3D printing] as a possible solution to the identified patient problem. Finally, students will submit a final Adobe Spark project and submit the link. Make sure you include a Peer Evaluation for each group member. The Makerspace Activity counts as 20% of your final grade.

If done correctly, these assignments provide evidence for the following competencies:

M1   Demonstrate mathematical literacy through solving problems, communication concepts, reasoning mathematically, and applying mathematical or statistical methods using multiple representations.

M5   Understand the role of science and technology in society.

Project Group Policy:

During the course of your Nursing Innovation Project, should you feel that any member of your group is not doing their share of the work, or if any wrongdoing is going on between group members, this should be reported to the professor immediately. Group work is a collaborative effort and is only as good as the sum of its parts. Therefore, whatever product is turned in as a group, each individual in the group will receive the same grade. This is in an effort to discourage one person in a group from doing all the work, as well as Identifying group members who are not doing a fair amount of the work. If the entire group deems a member unsound and reports it, appropriate action will be taken, which can include, but is not limited to, counseling sessions with the group and professor, individual reported counseling with

professor, and/or outright expulsion from the group with the expelled individual having to finish a different project on their own.

Peer Evaluation. Reflect on the strengths and weaknesses of yourself and your team members and suggest ways in which you and others could improve the work of the team in the future.

Grading Scale:
A = 90 - 100
B = 80 - 89
C = 75 - 79
D = 70 – 74.9
F = 69 and below
I = see University policy

Course Policies:
Assignments such as the CT2 Paper Draft, CT2 Final Paper, Makerspace, etc., must be completed and submitted by 11:59 p.m. on the due date (EST) for full credit. Late assignments or projects will have 5 points deducted per day for 3 days unless arrangements are made with the faculty **prior** to the due date and time. Assignments and projects not submitted within 3 days of due date will receive a zero (0). It is your responsibility to confirm that your assignment has been successfully uploaded and submitted via CANVAS. After you submit your assignment in CANVAS, please confirm that your assignment has been submitted. Take a screen shot showing the successful submission with date and time and save this. It is important to confirm that your assignment was submitted prior to the due date and time. To distinguish this, class activities, such as pre-class work in the modules, class work done during lab, **must be turned in by the due date at either 5 PM or 11:59 PM.** The class activities do not follow the 3 day assignments and projects submission guidelines.

Naming Convention for Submission of Course Documents:
Use the following naming format when you turn in course assignments.
1. The Course ID first, followed by a space.
2. Your last name followed by first initial, followed by a space.
   Example: N1400 ThriftJ NI
   [NI=Nursing Informatics]

Inclement Weather:
When county government offices are closed, local Clemson University campuses also are closed. Visit the county government offices website to monitor county office closings in your area.

Attendance Policy:
College work proceeds at such a pace that regular attendance is necessary for each student to obtain maximum benefits for instruction. Regular and punctual attendance at all class sessions is the responsibility of each student, and each student is responsible for all the work, including tests and written work. All absences are matters to be resolved between the student and the instructor. In the event that a

student finds it necessary to be absent from class, it is the student's responsibility to make up resulting deficiencies.

In the event that there is a conflict between class and a regularly scheduled academic or athletic activity sponsored by Clemson University, it is the responsibility of the student to inform the instructor of this requirement **in advance**. If this procedure is not followed, the instructor reserves the right to deny the student the opportunity to make up any quizzes, examinations or instruction missed. Excuses other than those involving official university functions are expected within one (1) week of the absence(s).

COVID-19 Statement from Clemson University

For a student who reports testing positive or is being asked to quarantine because of exposure to the virus, it will be up to the student to inform the instructor that they will be moving to online only instruction for at least the next two weeks. Students are directed to use the [Notification of Absence](#) form in Canvas to initiate this notification, which can be found under the "Help" button on the left navigation. (For courses where Canvas is not used, the direct link to the [Notification of Absence](#) form can be found through the [Division of Student Affairs](#) site.) Additional communication via email is encouraged; students should follow up with their instructor to develop a continued plan of study for each course. Students cannot be penalized in their grade for needing to move to online instruction.

COVID 19 Statement for lecture and other attendance related concerns:

Due to the recent Coronavirus (COVID-19) Pandemic, the Clemson University School of Nursing will be implementing the following requirements for all lectures and labs. **Currently, NURS 1400 lecture in-person. However, the following guidelines will be expected.** Strict observance for social distancing guidelines will be enforced, such as: all person will don face masks and gloves during close contact assessments; hand hygiene will be required. If you have symptoms associated with coronavirus, you must notify faculty beforehand via phone or text and stay at home. A Zoom session will be scheduled. You will need to provide a doctor's note so the absence can be excused like any other illness and fill out the Notification of Absence Link in Canvas. ***Please do not attempt to come to lecture under any circumstances if you have signs and symptoms related to COVID-19, the flu, if you are actively vomiting, or have a fever of 100.4 for the past 24 hours***.

Using the Zoom link:

A Zoom link has been provided for the lecture in the event of one of the following:
- COVID exposure, testing positive, or other COVID related occurrences, for which you have to quarantine with a doctor's note, for both students and faculty.
- Other sicknesses where you feel like you could still participant online, but can't attend in-person, with a doctor's note.

- Anticipated absences for university sanctioned functions, with supervisor forms indicating the absence is needed, and you are still able to attend the session synchronously.
- Inclement weather cancellation of in-person lecture
- University mandated switch to online learning
- Online learning as specified through Student Accessibilities Services (SAS) requiring this method for the semester.

<u>Virtual Learning Environment Code of Conduct</u>:

If Clemson University ever switches to an all online format at any point during the semester, lectures will then occur synchronously via Zoom during regularly scheduled class time. Students are expected to be prepared for the lecture by completing the "How to prepare for this week prior to class" section of the module corresponding to the topic for the week in Canvas. Students are expected to follow these guidelines during ALL virtual synchronous meetings:

- Cameras must be turned on and the student in view
- Engage in the content with faculty and peers (sit in a quiet space and let others in the environment know you are in a class)
- Mute the microphone unless called on to speak (there will be times for questions)
- Wear clothing as if coming to a live, in person class (appropriate attire for going out in public). Students should not wear pajamas to virtual classes
- Uniforms are to be worn during virtual sim and clinical sessions
- Students are to be seated at a desk or table (no lying in the bed)
- Students are to refrain from having conversations with others
- Students are to refrain from having meals (drinks are okay, there will be breaks for bathroom and snacks)
- Students must use/enter their first and last name as their name in Zoom (no iPhone or nicknames) to receive credit for attendance
- No smoking or vaping during virtual lectures
- NO DRIVING DURING VIRTUAL LECTURES
- Ensure the background is clear of clutter, do not sit with back against window and use an appropriate virtual background

Academic Integrity:

"As members of the Clemson University community, we have inherited Thomas Green Clemson's vision of this institution as a 'high seminary of learning.' Fundamental to this vision is a mutual commitment to truthfulness, honor and responsibility, without which we cannot earn the trust and respect of others. Furthermore, we recognize that academic dishonesty detracts from the value of a Clemson degree. Therefore, we will not tolerate lying, cheating, or stealing in any form."

You are expected to be on your honor not to cheat and to report cheating if you are aware of it. The university policy on academic dishonesty is outlined in the student handbook. Please read this section and know that I uphold the university policy and that cheating (including giving or receiving information on tests, homework,

plagiarism, lying about absences, homework, etc.) can result in an "F" in this course and a mark on your permanent record.

"Cheating" includes, but is not limited to:
1. Plagiarism on papers.
2. Giving answers to another on a test by writing large letters in margins, or not covering the test answers.
3. Copying test questions and giving to another student.
4. Talking during exams.
5. Having notes at the desk during exams.

Integrity violations will be reported as per University Policy and may not include notification of the suspected student.

Title IX Policy:

Clemson University is committed to providing a higher education environment that is free from sexual discrimination. Therefore, if you believe you or someone else that is part of the Clemson University community has been discriminated against based on sex, or if you have questions about Title IX, please contact the Title IX Coordinator Alesia Smith who is also the Executive Director of Equity Compliance, at 110 Holtzendorff Hall, 864-656-3181 (voice) or 864-656-0899 (TDD). The Title IX Coordinator is the person(s) designated by Clemson University to oversee its Title IX compliance efforts.

Safety:

Emergency Guidelines from Clemson University Police
All students and employees should be familiar with the following guidelines.
For additional information about safety, see
http://www.clemson.edu/cusafety/preparedness/.

Evacuation General Guidelines:
- Plan ahead. Know evacuation routes from your office and campus.
- If the building fire alarm is activated, leave without delay.
- Remain calm and listen for specific evacuation instructions.
- Do not return for personal items.
- Walk, do not run. Once outside the building move away from the exits.
- Do not go into the restrooms.
- Do not use the elevators!
- Direct visitors or anyone needing assistance to nearest stairwell.

Active Shooter:
- Always call 911 as soon as you possibly can.
- Run away from the area, if it is safe to do so, time allows and the gunman is not nearby.
- Hide if the gunman is too close to your location. Find a safer place, lock and barricade doors, turn lights out and cell phones off or to vibrate.
- Fight. As a last resort, resolve to fight the intruder with everything you have at your disposal.

A short video prepared and presented by the Department of Homeland Security can be found at the following link.

Student Accessibility Services:

Student Accessibility Services coordinates the provision of reasonable accommodations for students with physical, emotional, or learning disabilities. Accommodations are individualized, flexible, and confidential and are based on the nature of the disability and the academic environment, in compliance with Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990.

Students are encouraged to consult with the Student Accessibility Services staff early in the semester, preferably prior to the first day of class. Current documentation of a specific disability from a licensed professional may be needed. Additional information or appointments are available from Student Accessibility Services, Suite 239 in the Academic Success Center, 656-6848. Details on policies and procedures are available at https://www.clemson.edu/academics/studentaccess/. Accommodation letters must be received by course faculty within 2 weeks of the start of the semester.

Professor Delay:

In unusual circumstances, the professor may be delayed. In keeping with Clemson University policy, students are expected to wait for 15 minutes after the scheduled start of class before departing.

Testing Policy:

Each student is expected to attend all examinations. If a student must miss a scheduled exam, the student must notify the instructor prior to class. Any student who does not obtain prior approval from the instructor will receive a zero on the missed exam.

Academic Continuity Plan:

Clemson has developed an academic continuity plan for academic operations. Should University administration officially determine that the physical classroom facility is not available, class will be conducted in a virtual (online) format. The University issues official disruption notifications through email/www/test notification/social media. When notified, use one of the following links to navigate for Clemson Canvas, where you will find important information about how the class will be conducted:
- Primary access link: http://www.clemson.edu/canvas
- Secondary access link, if needed: https://clemson.instructure.com/
- You can also use the Canvas Student App.

Activities for teaching and learning will occur through our Canvas course. This includes assignments in Canvas for the topics assigned that day.

Text(s):

No textbook is required

Other:
Minimum of 8 GB Memory Key (Flash drive)
Cloud backup (e.g., Google Drive) of your NURS 1400 work.
Computer (must bring to **ALL** classes)
EHRTutor access (To be provided by instructor)