



**University of Massachusetts Dartmouth
College of Nursing
Master's Program**

| Course Information | |
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| Course Name: | Healthcare Informatics |
| Course ID: | NUR 510 |
| Semester: | Summer 2019 June 17 - August 6, 2019 (7 weeks) |
| Mode: | Online Didactic |
| Credits: | Three (3) |
| Placement: | Fall semester Year 2 OR Summer Session with permission from instructor |
| Pre-Requisites: | NUR 500, 511, 520, 547, 605 |

| Instructor Information | |
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| Instructor: | Ouida P. Dowd, MSN, RN, ACNS-BC, CCRN |
| Email: | ouida.dowd@umassd.edu |
| Phone: | 508-910-6444 Office: Dion 308 |
| Office Hours: | Virtual online office hours by appointment |

Course Description

This course examines fundamentals of healthcare informatics concepts, contemporary issues, and information management in relation to nursing knowledge and healthcare practice. Healthcare informatics science is a multidisciplinary field utilizing information technology to improve outcomes and safety. This course provides a broad overview of consumer health informatics, electronic health records, security and confidentiality, decision support systems, evidence-based practice, and standards of practice. Trends in healthcare technology, ethical issues, and the role of the nurse in developing and evaluating informatics applications are examined. Contemporary healthcare informatics issues related to quality and patient safety and the role of the nurse as a leader in healthcare are explored.

Course development is guided by the *AACN Essentials of Baccalaureate Education for Professional Nursing Practice (2008)* and the *ANA (2010) Scope and Standards of Practice*, *AACN (2011) Essentials of Master's Education in Nursing*, *AACN (2006) Essentials for DNP Education*, *QSEN-Level Graduate Competencies, Knowledge, Skills, Attitudes (2012)*, *Nursing Professional Development: Scope and Standards of Practice (2010)*, and the *ANA (2014) Scope and Standards of Public Health Nursing and Quad Council (2014) PHN Competencies*.

Course Outcomes

At the end of the course, the student will be able to:

1. Integrate professional responsibility, accountability, knowledge, and ethical decision making as the basis for delivering health care.
2. Synthesize knowledge and principles from the humanities, the physical and behavioral sciences, and current theoretical scientific and research knowledge into professional practice.
3. Examine healthcare informatics concepts, contemporary issues, and information systems and their impact on healthcare delivery, quality, and safety.
4. Analyze the social, political, and economic forces that drive healthcare information technology and shape healthcare policy.
5. Integrate inter-professional leadership, advocacy, communication, and collaboration to promote healthcare safety and patient care outcomes.

Required Books

American Psychological Association. (2010). *Publication manual of the American Psychological Association*. Washington, D.C.: American Psychological Association.

Nelson, R., & Stagers, N. (2018). *Health informatics: An interprofessional approach* (2nd edition). St. Louis, MO: Elsevier Mosby. ISBN: 978-0323402316

Additional readings and course materials are available on the myCourses site.

Communication Plan

Expectations for electronic communication

Please use course messages when the subject is of a personal and confidential matter. If the question you ask is of a nature that even one other person in the course could benefit from the answer, post the question in the appropriate discussion board forum in the mycourses site. Faculty check their email daily Monday through Friday during normal business hours. You can expect a reply within 24 hours during the work week. You may get an email reply during the weekend, but that would be an exception not normal practice.

Methods of Instruction

Teaching and learning are ongoing, dynamic processes. Core concepts and content will be presented to students using a variety of teaching-learning methods including:

- Assigned readings, lectures, videos, and online resources
- Narrated lecture presentations of key concepts and topics
- Module study guides
- Written assignments (including critical thinking exercises, case studies, discussion assignments, and written essays)
- Discussion forum participation and reflection on knowledge concepts
- Group discussion activity participation

- Written final paper analysis of a healthcare informatics system
- Video-recorded presentation of a healthcare informatics system analysis

Students can expect to spend a minimum of 9-12 hours per week engaged in course activities, assigned class work, reading, and online course work.

Federal credit-hour requirement: one credit-hour is an amount of work represented in intended learning outcomes and verified by evidence of student achievement that is an institutionally established equivalency that reasonably approximates not less than:

- 1) One hour of classroom or direct faculty instruction and a minimum of two hours of out-of-class student work each week for approximately fifteen weeks (includes exam week) for one semester or the equivalent amount of work over a different amount of time.
- 2) At least an equivalent amount of work as required in paragraph (1) of this definition for other academic activities as established by the institution, including laboratory work, internships, practica, studio work, and other academic work leading to the award of credit hours.

| Methods of Evaluation | | | |
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| Evaluation method | Number of | Percentage of final grade | Learning outcomes accomplished |
| Reflective Discussion Assignments | 5 | 50% | 1, 2, 3, 4, 5 |
| Written Paper: Analysis of a healthcare informatics system (HIS) | 1 | 30% | 1, 2, 3, 4, 5 |
| Audio-Video Presentation: HIS Analysis | 1 | 20% | 1, 2, 3, 4, 5 |

Please see the detailed overview of assignments further below and in the **Assignment Guidelines** folder on the online course site.

All written work in the College of Nursing is presented in APA (American Psychological Association) format. The APA Publication Manual is essential for students. APA resources for professional writing are posted on the course site.

Students needing assistance with writing are encouraged to contact the Writing Center early.

Students also have access to E-tutor writing services via myCourses.

Students needing assistance with searching the literature are encouraged to contact Hilary Kraus, MSI, Associate Librarian for Nursing & Health via email: hkraus@umassd.edu

Teaching-learning Responsibilities of Faculty

1. To guide students through assignments and discussions.
2. To construct assignments that foster critical thinking and support professional development.
3. To provide written guidelines for assessment of learner performance and timely feedback of discussions and assignments.
4. Faculty will be available for office or virtual conferences with students weekly throughout the semester as indicated by appointment. Students may message faculty at any time or talk with faculty online by appointment.
5. How to contact faculty:
Course-related questions should be posted in the **Course Q&A Discussion** on the course site as this allows everyone in the class to benefit from your question.

Personal concerns that you would like to keep private, should be discussed with faculty through a private course message. Faculty check messages daily Monday through Friday so you can expect a reply within approximately 24 hours.

Teaching-learning Responsibilities of the Student

1. To demonstrate commitment to the exploration of ideas and issues related to course content.
2. To be self-directed and communicate learning needs, questions, or concerns.
3. To take accountability for reviewing course content and discussions on a regular basis, weekly or more often, throughout the semester.
4. To take responsibility to contact faculty immediately when experiencing issues/concerns or difficulty related to course content and assignments. Communication with faculty is essential for student's academic success.
5. To engage in the online class and actively participate in online discussions.
6. To complete all course assignments on the designated due date.
7. To treat peers and faculty with respect to promote a positive academic atmosphere, to communicate professionally and respectfully, and to use proper on-line etiquette when posting discussions. Discourteous behavior, incivility, or bullying will not be tolerated.
8. To cite all references and sources used and to be mindful of plagiarism and academic dishonesty standards, including dishonesty on examinations.
9. To maintain confidentiality standards and HIPPA laws at all times in online interactions. Individuals will not be discussed online. All persons discussed should be fictitious and anonymous. Course discussions will not be shared in the work place or with any persons outside the course.
10. To submit assignments on time by each due date listed in the Class Schedule.
11. Due to the nature of online courses, students are highly encouraged to keep copies of all their discussion postings as well as assignments. CITS archives courses at the end of each semester so students will not have access once the course end.

Late Assignments

Assignments not submitted by the due date will not be accepted, unless the student communicates with faculty and obtains faculty permission **prior to the assignment due date**.

Incomplete Policy

According to the university catalogue, an incomplete may be given only in exceptional circumstances at the instructor's discretion. The student must be passing at the time of the request or be sufficiently close to passing. If the work is not completed within one year of the recording of the incomplete grade, the grade will become an F(I). The incomplete policy for this course is that at least 70% of the course must be already completed and an exceptional circumstance (i.e. medical issue) must exist. If you feel you require an incomplete for an exceptional reason, you need to contact me and state your reasons for requesting the incomplet. We will discuss a course of action.

Course Conduct

UMass Dartmouth policies regarding equal opportunity, discrimination, harassment, and sexual violence apply to all learning environments wherever they are located and from wherever they are taught. This applies to all University Extension face-to-face, off campus, blended, and online courses. Please see the Office of Diversity, Equity & Inclusion brochure for information at <http://www.umassd.edu/studentaffairs/departments/studentconductanddisputeresolution/studentcodeofconduct/>

The student will follow all rules and expectations of professionalism when representing the University of Massachusetts Dartmouth and the College of Nursing. Review the College of Nursing Behavioral Attributes outlined in the MS Student Handbook. <https://www.umassd.edu/nursing/studenthandbooks/>

Student Academic Integrity Policy

All UMass Dartmouth students are expected to maintain high standards of academic integrity and scholarly practice. The University does not tolerate academic dishonesty of any variety, whether as a result of a failure to understand required academic and scholarly procedure or as an act of intentional dishonesty.

A student found responsible of academic dishonesty is subject to severe disciplinary action which may include dismissal from the University. The procedure for responding to incidents of academic dishonesty may be found in Section III of this document. You may also refer to the Student Handbook for information about the judicial process.

A high standard of academic integrity promotes the pursuit of truth and learning and respect for the intellectual accomplishments of others. These are values that are fundamental to the mission of this University. Such values are undermined by academic dishonesty.

Academic freedom is a fundamental right in any institution of higher learning. Honesty and integrity are necessary preconditions of this freedom. Academic integrity requires that all academic work be wholly the product of an identified individual or individuals. Joint efforts are legitimate only when the assistance of others is explicitly acknowledged and deemed appropriate by the instructor of the course. Ethical conduct is the obligation of every member of the University community, and breaches of academic integrity constitute serious offenses.

Maintenance of the standards of academic integrity and the successful administration of this policy depend on the mutual cooperation of faculty and students. Faculty cooperation is essential for successful application of the procedures defined by this Academic Integrity Policy. Faculty members promote academic integrity by making clear on their syllabi their expectations concerning homework assignments, collaborative student efforts, research papers, examinations, computer-based infractions, and the like. Efforts should be made to detect and to prevent cheating and plagiarism in all academic assignments. If faculty members have evidence of academic dishonesty, they are expected to report such evidence promptly.

Students must assume responsibility for maintaining honesty in all work submitted for credit and in any other work designated by the instructor of the course. Students are also expected to report incidents of academic dishonesty to the instructor or dean of the instructional unit.

The intent of this policy is to make clear the standards of academic integrity at UMass

Dartmouth.

*For additional information on violations, infractions, and consequences visit the UMass Dartmouth Student Academic Integrity Policy at the link below.

<https://www.umassd.edu/policies/activepolicylist/academicaffairs/academicintegritypolicyandreportingform/>

SafeAssign Policy

Students should be aware that suspect written assignments and discussions (e.g., those without works cited pages, or with large departures in style) will be submitted to SafeAssign by faculty for the purpose of detecting possible plagiarism. Faculty may request electronic copies of each source listed in the final paper reference list in order for a student to receive a grade on the assignment and to avoid possible sanctions.

Students should also be aware that as a condition of continued enrollment in this course, when you submit your written paper assignment to the electronic assignment drop box you agree to submit assignments to the SafeAssign service for textual comparison or originality review for the detection of possible plagiarism.

All submitted SafeAssign assignments will be included in the UMass Dartmouth dedicated databases of SafeAssign assignments. These databases of assignments will be used solely for the purpose of detecting possible plagiarism during the grading process and during this term and in the future.

Center for Access and Success

In accordance with University policy, if you have a documented disability and require accommodations to obtain equal access in this course, please meet with the instructor at the beginning of the semester and provide the appropriate paperwork from the [Center for Access and Success](#). The necessary paperwork is obtained when you bring proper documentation to the Center, which is located in Liberal Arts, Room 016; phone: 508.999.8711.

Resources for UMass Dartmouth Students

Tutoring

If you are having difficulty with the class please:

- Contact faculty directly using the contact information listed at the top of this document.
- Contact the Academic Resource Center (ARC) for support:
 - Academic Resource Center, Liberal Arts - Room 7
 - Phone: 508.999.8708, Fax: 508.910.6404
- For help with writing assignments you can also make use of online writing tutoring.
 - eTutoring can be accessed at [this link](#) or by clicking the "Online Tutoring" link at the top of the myCourses Dashboard.

Technical Help

Technical support for myCourses is available 24/7:

- Students can email myCoursesHelp@umassd.edu or call the Student Help desk at **508-999-8505** during normal business hours. (Mon-Fri 9:00 a.m.-5:00 p.m. EST)

- During off-hours, weekends, and holidays, technical assistance is available for students at <http://umd.echelp.org/>

Support information for all other UMass Dartmouth technologies can be found here:
<http://www.umassd.edu/extension/technicalresources/>

Title IX Statement

The purpose of a university is to disseminate information, as well as to explore a universe of ideas, to encourage diverse perspectives and robust expression, and to foster the development of critical and analytical thinking skills. In many classes, including this one, students and faculty examine and analyze challenging and controversial topics. If a topic covered in this class triggers post-traumatic stress or other emotional distress, please discuss the matter with the professor or seek out confidential resources available from the Counseling Center, <http://www.umassd.edu/counseling/>, 508-999-8648 or - 8650, or the Victim Advocate in the Center for Women, Gender and Sexuality, <http://www.umassd.edu/sexualviolence/>, 508-910-4584. In an emergency contact the Department of Public Safety at 508-999-9191 24 hrs/day. UMass Dartmouth, following national guidance from the Office of Civil Rights, requires that faculty follow UMass Dartmouth policy as a “mandated reporter” of any disclosure of sexual harassment, abuse, and/or violence shared with the faculty member in person and/or via email. These disclosures include but are not limited to reports of sexual assault, relational abuse, relational/domestic violence, and stalking. While faculty are often able to help students locate appropriate channels of assistance on campus, disclosure by the student to the faculty member requires that the faculty member inform the University’s Title IX Coordinator in the Office of Diversity, Equity and Inclusion at 508-999-8008 to help ensure that the student’s safety and welfare is being addressed, even if the student requests that the disclosure not be shared. For confidential counseling support and assistance, please go to <http://www.umassd.edu/sexualviolence/>

Description of Assignments

Reflective Discussion Assignments

Assignment assist students in accomplishing course learning outcomes 1, 2, 3, 4, and 5.

There are five (5) reflective discussion assignments, totaling 50% of student’s final course grade (see class schedule for due dates). Reflective discussions are an online asynchronous seminar format where learning is shared and enhanced by the full participation of all students in the discussions. This is an opportunity for students to convey understanding and knowledge of content topics and share ideas with classmates. Learning is enhanced by participation and feedback from others on ideas generated by class discussions. Students are expected to be professional and respectful in all communication.

Assignment Guidelines

1. Each student will post an initial reflective discussion on the topic for the discussion assignment and respond to initial posts from two other students. Specific discussion topics and focused questions are posted in the online module assignment directions.
2. Students will post their initial reflective discussion (750 words minimum) by 11:59 pm EST Thursday.
3. Students will post responses (150 words minimum **each**) to initial posts from **two** other students by 11:59 pm EST Saturday.
4. On-line discussion should be professional, demonstrate engagement in the topic discussion of the issues, and contribute to the development of knowledge understanding.

5. Discussion format should include:
 - a. Proper on-line etiquette and respectful, professional communication in postings
 - b. Posting a thoughtful content-related question or insight on the topic and its pertinence to current issues
 - c. Participation in a follow-up conversation
 - d. Posting a relevant example of the topic of discussion
 - e. Responding to a classmate's posting in a substantive manner
 - f. Substantive participation should:
 - 1) add value to the discussion
 - 2) avoid simply repeating, agreeing with, or answering yes/no to peer's comments
 - 3) ask insightful questions
 - 4) answer other people's questions
 - 5) make comments that are relevant to the course content and objectives
 - 6) give insight gained from readings
6. A minimum of **three (3)** scholarly journal or textbook references (not web sites) and appropriate APA citations are required to support your discussion.
7. See the *Discussion Grading Rubric* on the course site.

Written Paper: Analysis of a Healthcare Informatics System

This assignment assists students in accomplishing course learning outcomes 1, 2, 3, 4, and 5.

A written APA format paper, worth 30% of the student's final course grade, will be due at the end of the semester (see class schedule for due date). Students will synthesize knowledge learned in this course and from previous university studies to independently analyze a healthcare informatics system (HIS) in their clinical practice environment. Students will evaluate the system and its impact on health care delivery and health outcomes. Do not reveal the name of your healthcare institution to protect their privacy and confidentiality.

Course content and readings will guide students in HIS analysis and evaluation. In addition to course readings, students can find pertinent scholarly articles on HIS in informatics journals such as *Modern Healthcare*, *Healthcare Informatics*, *Hospitals & Health Networks*, etc. Students may also want to talk with informatics specialists in their healthcare organizations.

Assignment Guidelines

1. Introduction (15 %)

Includes an introduction to the topic of interest and a concise, detailed definition and overview of the scope of the topic, concept, or issue and its pertinence to nursing practice and health care informatics.
2. Significance of the topic (25 %)

Detailed discussion and summary of significant issues and their impact on health care informatics for nursing practice. Discussion demonstrates knowledge of the topic and integrates learning from the textbook, scholarly literature, and class discussions. References are cited to support discussion.
3. Application (15 %)

Evidence-based implications for application are discussed. Describe the current HIS configuration and any issues. Analyze the key HIS workflows, protocols, and communications processes. Evaluate systems issues and potential workflow alternatives. Indicate pros, cons, and unresolved issues for alternatives. Discussion demonstrates development of insight on the importance of healthcare informatics systems and includes

critical evidence-based interventions that need to be addressed. Key references are cited to support discussion and reflect critical evaluation.

4. Implications for practice (15 %)

Analyze/evaluate the extent to which HIS issues impact the health care setting and nursing practice. What changes are recommended to improve health care informatics in practice to promote health care outcomes? Key references are cited to support discussion and critical evaluation.
5. Conclusion (20 %)

Summarize the key points of your analysis of the HIS in your clinical practice environment.
6. Format, grammar, timeliness, and paper requirements (10 %)
 - a. APA format, including correct grammar and spelling, is followed. The paper is logically organized with an introduction, discussion, and conclusions sections.
 - b. APA format headings are used appropriately throughout paper.
 - c. References are cited to support student's reflection, insight, argument, and discussion.
 - d. A minimum of six (6) scholarly references are required. Scholarly references do not include web links or sources that are not peer-reviewed.
 - e. Paper length is between 8-10 pages, excluding the title and reference pages. An abstract page is not required.
 - f. Paper is submitted on or before the due date.
 - g. See the *Paper Guidelines* and *Grading Rubric* on the course site.

Audio-Video Presentation: Analysis of a Healthcare Informatics System

This assignment assists students in accomplishing course learning outcomes 1, 2, 3, 4, and 5.

This presentation is worth 20% of the student's final course grade. The video presentation is a **brief summary** (5 minutes or less) of the student's findings and analysis of a healthcare informatics system (HIS) in their clinical practice environment. Students also reflect on insights that they have learned during the HIS analysis process.

Students will create a brief PowerPoint summarizing the essential components of their HIS analysis following the main headings in the paper assignment guidelines above. Students will present their evaluation to the online class in the form of a brief video recording of their PowerPoint presentation (5 minutes or less) at the end of the semester. Please do not reveal the name of your healthcare institution to protect your organization's privacy and confidentiality.

See the *Presentation Grading Rubric* on the course site.

This syllabus is a guide and every attempt is made to provide an accurate overview of the course. However, circumstances and events may make it necessary for faculty to modify the syllabus during the semester and may depend, in part, on the progress, needs, and experiences of the students. Any change will be made with advance notice to the students.

| Class | Topics | Learning Activities |
|---|---|---|
| Week 1 June 16 - 22 | Introduction to Health Informatics (HI) Overview and history of HI, theories, and concepts Biomedical informatics Data science, knowledge discovery, and data mining Information Science Models for evaluation and management of HI Unified language systems; Systems life cycles | Read ch. 35, 2, 4, 19, and 23 Read assigned articles Complete module activities and assignments Review assignment and begin HIS analysis in your clinical setting Post Introduction by Saturday Discussion 1 initial post due Saturday |
| Last day to add/drop courses: JUNE 18, 2019 | | |
| Week 2 June 23 - 29 | Infrastructure for HI Clinical information management systems Clinical decision support systems (CDSS) Interoperability and usability Evidence-based practice; Health information exchange EBP initiatives for quality improvement | Read ch. 3, 5, 10, and 21 Read assigned articles Continue work on your HIS analysis Discussion 2 initial post due Thursday Respond to 2 peers by Saturday |
| Week 3 June 30 – July 6 | HI Ethics, Safety, and Security Quality and safety; Data integrity and security Ethical considerations and decision-making EHRs, care management, and health outcomes promotion Point-of-Care applications and community-based HI Health consumer information sources Mobile health (mHealth) | Read ch. 6, 9, 15, 24, and 26 Read assigned articles Continue work on your HIS analysis Post 2 paragraphs on your HIS analysis findings so far |
| Week 4 July 7 – 13 | HI Standards and Regulation Data standardization and health IT governance Accreditation and federal regulation Accountable care organizations and core competencies Meaningful Use | Read ch. 22, 25, 27, and 29 Read assigned articles Continue work on your HIS analysis Discussion 3 initial post due Thursday Respond to 2 peers by Saturday |
| Week 5 July 14 – 20 | Adoption and use of HI Challenges of HI adoption HI policies and nursing competencies and accountability Role of nurses in organizational IT processes Educating professionals to promote HI use and competency | Read ch. 28, 30, 31, and 32 Read assigned articles Continue HIS analysis work Discussion 4 post due Thursday Respond to 2 peers by Saturday |
| Last day to withdraw from courses: JULY 23, 2019 | | |
| Week 6 July 21 – 27 | Advancing HI Patient-centered care models Public health and global HI Sociopolitical and economic influences Challenges and potential for advancing health care Simulation and eHealth initiatives | Read ch. 11, 12, 33, and 34 Read assigned articles Complete required course & faculty evals Discussion 5 post due Thursday Respond to 2 peers by Saturday |
| Week 7 July 28 – August 4 | Future HI Research promoting HI and nursing knowledge Future HI applications Impact on nursing and health care Role of nurse experts Analysis of a Health Informatics System | Read ch. 36 and assigned articles Presentation due Saturday August 3, 2019 Paper due Monday August 5, 2019 |

Any changes to the Class Schedule will be made with advance notice to students