COURSE OUTLINE: HIN104 - HEALTHCARE INFO TECH

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Course Code: Title	HIN104: HEALTHCARE INFORMATION TECHNOLOGY
Program Number: Name	2197: HEALTH INFORMATICS
Department:	COMPUTER STUDIES
Academic Year:	2024-2025
Course Description:	This course will provide the basic foundation of health information technology (HIT) through current definitions and topics, such as: health informatics, health care data, electronic health record, acute and primary care. Students will explore the health information technology being used in a variety of settings, such as: hospitals, public health, long term care, community, and physician`s offices. The course will also investigate how healthcare professionals and patients/consumers use data. Students will also be exposed to the advancements in HIT globally through health informatics, mobile technology, the use of telemedicine, and artificial intelligence (AI) applications.
Total Credits:	3
Hours/Week:	3
Total Hours:	45
Prerequisites:	There are no pre-requisites for this course.
Corequisites:	There are no co-requisites for this course.
Vocational Learning Outcomes (VLO's) addressed in this course: **Please refer to program web page for a complete listing of program outcomes where applicable.**	**2197 - HEALTH INFORMATICS** VLO 1 Assess organizational requirements for health information system technologies (HIST). VLO 6 Synthesize relevant local, national and global health care and health information management issues, trends, and evolving technologies to support health information systems and processes. VLO 8 Communicate effectively and professionally to promote inter-professional collaboration across the organization.
Essential Employability Skills (EES) addressed in this course:	EES 6 Locate, select, organize, and document information using appropriate technology and information systems. EES 7 Analyze, evaluate, and apply relevant information from a variety of sources. EES 11 Take responsibility for ones own actions, decisions, and consequences.
Course Evaluation:	Passing Grade: 50%, D A minimum program GPA of 2.0 or higher where program specific standards exist is required for graduation.

Other Course Evaluation & Assessment Requirements:	A+ = 90-100% A = 80-89% B = 70-79% C = 60-69% D = 50-59% F < 50% Students are expected to be present to write all tests in class, unless otherwise specified. If a student is unable to write a test due to illness or a legitimate emergency, that student must contact the professor prior to class and provide reasoning. Should the student fail to contact the professor, the student shall receive a grade of zero on the test. If a student is not present 10 minutes after the test begins, the student will be considered absent and will not be given the privilege of writing the test. Students exhibiting academic dishonesty during a test will receive an automatic zero. Please refer to the College Academic Dishonesty Policy for further information. In order to qualify to write a missed test, the student shall have: a.) attended at least 75% of the classes to-date. b.) provide the professor an acceptable explanation for his/her absence. c.) be granted permission by the professor. NOTE: The missed test that has met the above criteria will be an end-of-semester test. Labs / assignments are due on the due date indicated by the professor. Notice by the professor will be written on the labs / assignments and verbally announced in advance, during class. Labs and assignments that are deemed late will have a 10% reduction per academic day to a maximum of 5 academic days at 50% (excluding weekends and holidays). Example: 1 day late - 10% reduction, 2 days late, 20%, up to 50%. After 5 academic days, no late assignments and labs will be accepted. If you are going to miss a lab / assignment deadline due to circumstances beyond your control and seek an extension of time beyond the due date, you must contact your professor in advance of the deadline with a legitimate reason that is acceptable. It is the responsibility of the student who has missed a class to contact the professor immediately to obtain the lab / assignment. Students are responsible for doing their own work. Labs / assignments that are handed in and are deemed identical or near identical in content may constitute academic dishonesty and result in a zero grade. Students are expected to be present to write in-classroom quizzes. There are no make-up options for missed in-class quizzes. Students have the right to learn in an environment that is distraction-free, therefore, everyone is expected to arrive on-time in class. Should lectures become distracted due to students walking in late, the professor may deny entry until the 1st break period, which can be up to 50 minutes after class starts or until that component of the lecture is complete. The total overall average of test scores combined must be 50% or higher in order to qualify to pass this course. In addition, combined tests, Labs / Assignments total grade must be 50% or higher.
Books and Required Resources:	Information Technology for the Health Professions by Lillian Burke, Barbara Weill Publisher: Pearson Edition: 5th Edition ISBN: 9780134877716

Course Outcomes and Learning Objectives:

Course Outcome 1	Learning Objectives for Course Outcome 1
Introduction to health informatics and the uses of health information technology (HIT) in an administrative setting.	1.1 Define medical/clinical/health informatics. 1.2 Define the electronic medical record (EMR) and electronic health record (EHR), and describe the differences. 1.3 Define interoperability. 1.4 Discuss the issues raised by several studies of the computerization of health records. 1.5 Summarize the common uses of HIT in an administrative setting.
Course Outcome 2	**Learning Objectives for Course Outcome 2**
Health information technology and telemedicine.	2.1 Define telemedicine. 2.2 Describe the various subspecialties of teleradiology, telepathology, teledermatology, telecardiology, teleneurology, telestroke, telepsychiatry, telewound care, telehome care, and the use of smartphones and tablet computers as mobile computing devices. 2.3 Discuss the legal, licensing, insurance, and privacy issues involved in telemedicine.
Course Outcome 3	**Learning Objectives for Course Outcome 3**
Introduction to health information technology in public health.	3.1 Define the field of public health and public health informatics. 3.2 Discuss the use of computers in the study of disease. 3.3 Define epidemics and pandemics, and the role of computers and statistics in their study. 3.4 Define computer modeling of disease.
Course Outcome 4	**Learning Objectives for Course Outcome 4**
Health information technology in radiology, surgery, pharmacy and dentistry.	4.1 Describe the contributions of digital technology to imaging techniques. 4.2 List the uses of traditional X-rays and the advantages of digital X-rays and explain the different uses of HIT in radiology. 4.3 Define nanotechnology and describe computer-aided detection. 4.4 Analyze and describe the role of computers in surgery and surgical planning. 4.5 Describe some of the advantages and disadvantages of computer-assisted surgery. 4.6 Describe the contributions of information technology to the development and testing of medicines. 4.7 Define biotechnology and rational drug design. 4.8 List the uses of computers in clinical drug trials. 4.9 Explain the impact of information technology on pharmacy, as it affects pharmacists, patients, and hospital administrators. 4.10 Describe the use of computers in relevant healthcare settings. 4.11 Discuss the significance of the electronic patient record in integrating practice management and clinical applications.

Course Outcome 5	Learning Objectives for Course Outcome 5
Health information technology in informational resources including computer-assisted instruction, expert systems and health information online.	5.1 List the many informational resources that computer technology and the Internet have made available and their use in the health care fields. 5.2 Describe the use of computer-assisted instruction (CAI) in health care education. 5.3 Describe simulation programs, such as ADAM, that make use of text and graphics. 5.4 Describe simulation programs that make use of virtual reality (VR) to teach surgical procedures, dentistry, and other skills. 5.5 Define patient simulators. 5.6 Discuss the role of expert systems in health care. 5.7 Describe the resources on the Internet, including medical literature databases, physicians` use of e-mail, general information and misinformation, and support groups, and be able to discuss both the positive and negative consequences of using the Internet as a resource for health information. 5.8 Describe health-related uses of smartphones and tablet computers.
Course Outcome 6	**Learning Objectives for Course Outcome 6**
Health information technology in clinical therapies including computerized medical devices, assistive technology, and prosthetic devices.	6.1 Describe the contribution made to the design of medical devices by information technology and be able to discuss the advantages of computerized medical monitoring systems over their predecessors. 6.2 Describe the use of computerized devices in delivering medications. 6.3 List assistive devices for those with impaired vision, speech, hearing, and mobility. 6.4 Discuss speech recognition devices, speech synthesizers, and screen readers. 6.5 Describe the contributions computer technology has made to the development of prosthetics. 6.6 Describe the contributions computer technology has made to improving sight for the blind and colorblind and hearing for the deaf. 6.7 Discuss the uses of computers in rehabilitative therapies.

Evaluation Process and Grading System:

Evaluation Type	Evaluation Weight
Labs	40%
Quizzes	10%
Test 1	25%
Test 2	25%

Date: June 16, 2024

Addendum: Please refer to the course outline addendum on the Learning Management System for further information.