THE UNIVERSITY OF WINNIPEG

APPLIED COMPUTER SCIENCE

Course Number - ACS-2816-001
Course Name – Health Information Systems

Instructor Information

Instructor: Kevin Robertson, MBA   **Office:** 3C08B
E-mail: ke.robertson@uwinnipeg.ca   **Office Hours**: W: 17:00 - 18:00 p.m.
                                                                                              or by email appointment

Class Meeting Time: W: 18:00-21: p.m.   **Room No:** 3D03
Course Web Page: www.acs.uwinnipeg.ca/2816
Instructor's Home Page: www.acs.uwinnipeg.ca/2816/2816-001

Important Dates

First Class: Wed Jan 10th, 2018
Reading Week (No classes)   Feb 18th – Feb 24th, 2018
Midterm Exam: Tue Feb 28th, 2018 (in class hours)
Final Withdrawal Date w/o academic penalty: Tue Mar 14th, 2018
(A minimum of 20% of the work on which the final grade is based will be evaluated and available to the student before the voluntary withdrawal date)
Last Class: Wed Apr 4th, 2018
Final Exam: Fri Apr 13th, 2018 @ 18:00 – 21:00 pm

Course Objectives/Learning Outcomes

This course is an introduction to health informatics concepts and their applications. It provides an overview of concepts and current themes in health informatics – a discipline that deals with the collection, storage, retrieval and use of health related data, information and knowledge. We will explore a number of topics central to the understanding of the field. This course is intended for those who wish to get sufficient background to follow progress and potentially carry out development activities in the field. Readings and case studies describe health informatics systems.

Evaluation Criteria

- Assignments: 10%
    - There will be 4 assignments worth 2.5% each.
    - May include any or a combination of the following:
        - Theory, programming, or analysis homework
        - Closed-book in-class quizzes.
    - Due at the beginning of class on due dates.
    - No late assignment will be accepted, or under special circumstances accepted with 20% off for each late day.
    - Assignments should be hand in by due date on paper (no handwritten) unless email submission is requested. Handwritten assignments will not be accepted.
    - Multiple submissions are not permitted. Students may submit a partially completed assignment, and will receive credit for those attempted problems.
    - If electronic hand in is requested, students are responsible to review their assignments before submission to make sure the correct files are attached to the email.
- Term paper: 10%
    - You will required to study a current article related to the course and present in class its summary by using a PowerPoint presentation.
- Midterm Exam: 30%
    - Closed-book in-class midterm exam.
- Final Exam: 50%
    - Closed-book final exam.

Exam Requirements

- Photo ID at exam is required.
- You are expected to write the test/exam on its given day.
- No electronic devices (e.g. cell/smart phone, laptop, scientific calculators, translators, etc.) are permitted.
- Simple calculators can be used though. Simple calculators are subjected to test and can be denied use at mid-term test and final examination times.
- Unless a medical certificate is provided, no accommodation is made for missed exams.

Email Communication

Emails from accounts at uwinnipeg.ca are usually not filtered by the UofW email filter. Thereby it is recommended electronic communication used for the course utilize a UofW email account to minimize the risk of filtering.

Services for Students with Disabilities

Students with documented disabilities, temporary or chronic medical conditions, requiring academic accommodations for tests/exams (e.g., private space) or during lectures/laboratories (e.g., note-takers) are encouraged to contact Accessibility Services (AS) at 786-9771 or email accessibilityservices@uwinnipeg.ca to discuss appropriate options. All information about a student's disability or medical condition remains confidential. http://www.uwinnipeg.ca/accessibility.

All students, faculty and staff have the right to participate, learn and work in an environment that is free of harassment and discrimination. The UW Respectful Working and Learning Environment Policy may be found online at www.uwinnipeg.ca/respect.

The University of Winnipeg promotes a scent-free environment. Please be respectful of the needs of classmates and the instructor by avoiding the use of scented products while attending lectures. Exposure to perfumes and other scented products (such as lotion) can trigger serious health reactions in persons with asthma, allergies, migraines or chemical sensitivities.

Required Text Book(s)/Reading List

Biomedical Informatics, Computer Applications in Health Care and Biomedicine
Shortliffe, Edward H.; Cimino, James J. (Eds)
Springer 4th Edition 2014
ISBN 978-1-4471-4473-1 (Hardcover)
ISBN 978-1-4471-4474-8 (eBook)

Optional Complementary Text Book(s)

Health Informatics: Practical Guide for Healthcare and Information Technology Professionals
Holt, Robert .E.; Yoshihashi, Ann (Eds)
6th Edition 2014
ISBN 978-1-3047-9110-8 (Paperback)
ISBN 978-0-9887-5292-4 (eBook)

Prerequisite and Restriction Information[*]

(This information can be found in the UW General calendar)

- Prerequisites: A grade of at least C in ACS-1803(3) or permission of Department Chair

*Make sure that you have the necessary prerequisites to take this course. If you have not successfully completed the above listed course(s), it is in your interest to go to student registration office and officially drop the course.

Misuse of Computer Facilities, Plagiarism, and Cheating

Academic dishonesty is a very serious offense and will be dealt with in accordance with the University's policies. Be sure that you have read and understood Regulations & Policies #8, in the 2017-2018 UW Undergraduate Academic Calendar available at http://uwinnipeg.ca/academics/calendar/docs/regulationsandpolicies.pdf.

Additional information is available at University of Winnipeg library video tutorial "Avoiding Plagiarism" https://www.youtube.com/watch?v=UvFdxRU9a8g

Avoiding Academic Misconduct. Uploading essays and other assignments to essay vendor or essay trader sites (filesharing sites that are known providers of essays for use by others who submit them to instructors as their own work) involves "aiding and abetting" plagiarism. Students who do this can be charged with Academic Misconduct.

Avoiding Copyright Violation. Course materials are owned by the instructor who developed them. Examples of such materials are course outlines, assignment descriptions, lecture notes, test questions, and presentation slides. Students who upload these materials to filesharing sites, or in any other way share these materials with others outside the same class without prior permission of the instructor/presenter, are in violation of copyright law and University policy. Students must also obtain instructor/presenter permission before photographing or recording slides, presentations, lectures, and notes on the board.

Course Outline (Tentative)

I. Foundational Health Informatics
- Introduction to Health Informatics
- Biomedical Data: Acquisition, Storage and Use
- Biomedical Decision Making
- Health Systems Design and Basic Concepts
- Standards in Health Informatics
- Ethics, Privacy and Confidential in Health Informatics
- Evaluation and Technology Assessment

II. Applied Health Informatics
- Electronic Health Record Systems
- Management of Clinical Information
- Consumer Health Informatics
- Patient Monitoring Systems
- Medical Imaging Informatics

III. Health Informatics Ahead
- Future of Computer Applications in Health Care

Note that all topics listed may not be covered and may be offered in a slightly different time order.

Additional Course Related Information

1. When it is necessary to cancel a class due to exceptional circumstances, instructors will make every effort to inform you via uwinnipeg email, as well as the departmental assistant and Chair/Dean so that class cancellation forms can be posted outside classrooms.

2. Your uwinnipeg email address will normally be used for course related correspondence.

3. Please note that withdrawing before the VW date does not necessarily result in a fee refund.

4. April 5, 2018 is the class make-up date for courses that conflict with Good Friday, March 30.

5. No classes: Feb. 18-24 Winter Mid-term reading week; Friday, March 30 (Good Friday).