

Cosumnes River College
HCIT 142
Installation and Maintenance of Health Care IT Systems
A Hybrid-Online Course
Spring 13
(1st 8 weeks)

Instructor: Buddy Spisak

Office Hours: Mon. 6:30-7:40 p.m. (Jan. 28 to May 22)

Office: BS-143

Voice Mail: (916) 568-3100 ext. 14162 or (800) 486-8156 ext. 14162

Email: spisakj@crc.losrios.edu The turn-around time for responding to most emails is about one to two days. Be sure to include your name and the course number in each email so I can identify who you are and what the email is about.

Course Web page: <https://d2l.losrios.edu/>

Instructor Web page: <http://wserver.crc.losrios.edu/~spisakj/>

Microsoft Messenger: You can also add me to your contact list for Windows Messenger. You can use my email address to find me.

Prerequisites: None

Lecture: Online

Lab: Wednesday 7:05pm to 8:30pm (15117)

Accepted for Credit: N/A

Class Credits: 2 units

Required Textbooks:

None

Be sure to attend class the first day (January 23) to pick up necessary materials.

Course Description:

This course covers the installation and maintenance of a Health IT system, including testing prior to implementation. Introduction to principles underlying system configuration is also covered. This course is designed for students who have been accepted in the Health Care IT Workforce program.

Student Learning Outcomes and Course Objectives:

As a result of completing this course, you will be able to:

- DESCRIBE THE USE OF CLIENT AND SERVER HARDWARE TO ACCESS AND STORE EHRS (SLO #01).
 - Describe network needs to access and store EHRs.
 - Identify application software and back-end data storage software in a Health IT System.
- DEFINE COTS (COMMERCIAL OFF-THE-SHELF) AND IN-HOUSE/HOMEGROWN SYSTEMS AND DESCRIBE THEIR RELATIVE ADVANTAGES AND DISADVANTAGES (SLO #02).
 - Estimate costs and consider advantages and disadvantages of purchasing versus licensing hardware and software.
 - Explain vendor documentation of system functionality and requirements.
 - Determine whether systems meet ARRA "Meaningful Use" criteria.
 - Compare and rank vendor systems.
 - Evaluate and select system based on requirements and certification needs.
- IDENTIFY POSSIBLE STEPS TO CHOOSING AN EHR SYSTEM (SLO #03).
 - Gather functional requirements from institution and users.
 - Document use-cases and relate them to functional requirements.

- Prioritize functional requirements, including grouping as essential versus desired.
 - Identify minimum and recommended software and hardware requirements.
- CREATE PROJECT PLAN FOR SYSTEM DESIGN AND IMPLEMENTATION, INCLUDING DATA MIGRATION AND CONVERSION (SLO #04).
- DEFINE THE STEPS OF THE SOFTWARE DEVELOPMENT LIFE CYCLE (SDLC) AND THE PURPOSE AND IMPORTANCE OF EACH ONE (SLO #05).
 - Map project plan to SDLC model.
 - Choose a popular, commonly known software application and describe how it might have gone through the SDLC.
- IDENTIFY REGULATORY REQUIREMENTS, SUCH AS HIPAA, FOR EHRS AND INTEGRATE THEM INTO THE PROJECT PLAN (SLO #06).
 - Identify best practices for OS and network system security installation and patches (such as those provided by vendors, SANS, and ISC2) and integrate into project plan.
 - Provide training for system users regarding the methods and importance of security compliance.
- IDENTIFY AND IMPLEMENT AN EFFECTIVE TROUBLESHOOTING PROCEDURE FOR REPORTING, EVALUATING, FIXING, DEPLOYING, AND FOLLOWUP OF ERRORS, PROBLEMS, OR LIMITATIONS FOR THE SYSTEM (SLO #07).
 - Develop a process for communicating requirements and supplying updates between vendors/developers and users.
 - Create a baseline for system performance measurement and comparison for troubleshooting.
- PERFORM SYSTEM TESTING AND VALIDATION (SLO #08).
 - Gather user feedback and performance baseline for system validation and testing.
 - Document problems with their resolution status.
 - Create, execute, and document a test plan.

Methods of Measuring Student Learning Outcomes:

- You will demonstrate knowledge of network and Internet security applications and standards through class discussions and achievement on quizzes and final examination.
- You will demonstrate competence in the coursework by completing lab work and participating in Desire 2 Learn (d2l) discussions during the semester.

Student Obligations:

- **Attendance:** Participation in the HCIT online orientation is available at http://www.crc.losrios.edu/Areas_of_Study/Business_and_Family_Science/Health_Care_IT_Workforce_Roles_Training_Program.htm. Be sure to go through the orientation before January 23. The final exam will be on March 13. As with any online course, attendance at the first class meeting (January 23) and the last class meeting (March 13) is required. There will be weekly lab time on campus, and it is up to you to complete the lab assignments during the lab time or at home.
- **Late Work:** Unless noted, all assignments are due on Tuesday by midnight each week. Late work will be accepted ONLY if you have contacted me prior to the due date either by email or voice mail. In general, late work is due the next week, and no late assignments may be turned in after one week from the original due date regardless of the reason. For every day an assignment is late, you will lose 10% of its grade.
- **Due Dates:** Unless noted, all assignments will be submitted in Desire 2 Learn (d2l) under the "Dropbox" link. If, for any reason, you cannot access d2l or are unable to submit the assignment on time, please email it to me instead so that you are not penalized for being late. Quizzes and the discussion items cannot be taken past their due dates. If you miss a quiz and you want to make up points, you can take advantage of the extra credit assignments posted in d2l. Everyone is welcome to work on the extra credit assignments. Typically, they are five to ten points each, depending on the difficulty of the assignment.

- **Labs:** There will be seven labs credited for homework for the class. The labs will consist of exercises and activities. The due dates are located in the **SCHEDULE** portion of this handout. We will spend a lot of time working on lab activities. Each lab has a set of review questions that you will need to answer in d2l in order to receive points for that assignment. If you do the lab work at the college during the regularly scheduled lab time, you will not have to submit your results in d2l. Instead, I will visually confirm your work and assign your points in class.
- **Discussions:** I want everyone to take a pro-active approach to learning this material. This includes using the Discussions link to ask questions and also answer other students' questions. I will also post questions each week that you can answer to further your understanding of the material. I expect two postings each week unless otherwise noted.
- **Final Exam:** The final exam will consist of two parts. One part of the exam will be a hands-on practical demonstration of assigned tasks, and the other part will be an exam taken in d2l.
- **Plagiarism Policy:** It is inappropriate, and a violation of academic policy, to copy information from any source (including, but not limited to, textbooks, magazine articles, newspaper articles, and Internet articles) without giving proper credit to the author by using standard quotation procedures such as in-line quotes, footnotes, endnotes, etc. Quotes may not exceed 25% of the assignment's total length. You will receive no credit (0 points) for any assignment that copies any material from any other source without giving proper credit to the author(s). Repeat offenders of this policy are subject to academic discipline as outlined in the policies published by the college.
- **Cheating:** Students who cheat will receive a failing grade for the course. See the Students Rights and Responsibilities page of the college website (http://www.crc.losrios.edu/College_Catalog/General_Information/Students_Rights_and_Responsibilities.htm) for additional information.
- **CRC Honor Code:** Academic integrity requires honesty, fairness, respect and responsibility. See the Cosumnes River College Honor Code posted on the college website (http://www.crc.losrios.edu/Faculty_and_Staff/Faculty_and_Staff_Resource_Guide/Faculty_Resources/Student_Behavior_and_Academic_Integrity/CRC_Honor_Code.htm).
- **Email:** Every student will be required to have an email account. If you do not have an email account, the college provides free email accounts for all current students. To activate your account, go to <https://imail.losrios.edu/> and follow the directions provided.
- **Email etiquette:** I will not tolerate rude and demeaning comments or emails to anyone in this class. Please keep your comments and emails topic-related. If I determine that a comment or email to anyone else in the class is rude or demeaning, I will warn you once. If your behavior continues to be unacceptable, I will refer you to the administration of the college for disciplinary action.
- **Personal belongings:** No food or drinks are allowed in the classroom. All cell phones, beepers, pagers, etc. should be turned off or set to vibrate.
- **Disabilities:** If you have a documented disability and wish to discuss academic accommodations, please contact me after class or the Office of Disabled Student Programs and Services at 691-7275 as soon as possible.
- **Campus Police:** You can call 691-7777 to request a safety escort.
- **Desire 2 Learn (d2l):** This class utilizes a product called "Desire 2 Learn." It is highly recommended that you check the website frequently for scheduling updates and homework assignments. Most of the homework assignments and quizzes will be done on d2l.
- **Online Course Responsibilities:** This course requires significant self-motivation. You must not get behind. Labs and weekly assignments can take up to 8 hours to finish. Please don't try to finish them in one day. Not all activities are created equal. Some may take a bit longer than others. You would normally spend 3 hours per week in class for this course: total of 54 hours.

Allow yourself at least 8 hours per week to complete the activities online, including the time spent writing for the postings to the discussions page. You should plan additional time to read the material and study for the quizzes. Some people believe this is a much easier way to study this subject than an on-campus framework because they love to read and avoid the parking problems. Others feel very intimidated at first. Be patient as you work your way through the activities.

Grading:

Course Topic	Points	Total	Approximate % the of Grade
Labs (7)	50	350	43
Orientation Quiz (1)	10	10	1
Quizzes (4)	30	120	15
Discussions (7)	20	140	17
Final Exam (1)	200	200	24

Point System:

There are 820 total assigned points.

Grade Ranges:

A=738-820, B=656-737, C=574-655, D=492-573, F=0-491

Schedule: It is tentative and can change during the course of the term. All changes will be located under the "News" section in d2l for the course.

	Day:		Lecture/Lab Schedule:	Assignment Due:	Due Date (By Midnight):
Week 1	Wed.	(1/23)	Orientation and Introductions	Introductory Disc.	Tues., 1/29
			Unit 1: Health IT System Elements Unit 2: System Selection – Software & Certification	View the Online Orientation Quiz	
			Lab #1		
Week 2	Wed.	(1/30)	Unit 3: System Selection – Functional & Technical Requirements Unit 4: Structured System Analysis & Design	Disc. #1 Quiz #1 (Units 1-3)	Tues., 2/5
			Lab #2	Lab Review #1	
Week 3	Wed.	(2/6)	Unit 5: SDLC (Software Development Life Cycle) Model Unit 6: System Security Procedures & Standards	Disc. #2 Quiz#2 (Units 4-6)	Tues., 2/12
			Lab #3	Lab Review #2	
Week 4	Wed.	(2/13)	Unit 7: System Interfaces & Integration	Disc. #3	Tues., 2/19
			Lab #4	Lab Review #3	
Week 5	Wed.	(2/20)	Unit 8: Troubleshooting, Maintenance & Upgrades, & Interaction with Vendors, Developers, and Users	Disc. #4	Tues., 2/26
			Lab #5	Lab Review #4	
Week 6	Wed.	(2/27)	Unit 9: Creating Fault Tolerance Systems, Back-ups, and Decommissioning	Disc. #5 Quiz#3 (Units 7-9)	Tues., 3/5
			Lab #6	Lab Review #5	
Week 7	Wed.	(3/6)	Unit 10: Developing a Testing Strategy & Test Plan Unit 11: Pilot Testing & Full-Scale Deployment	Disc. #6 Quiz#4 (Units 10-11)	Tues., 3/12
			Lab #7	Lab Review #6	
Week 8	Wed.	(3/13)	Final Exam	Disc. #7	Wed., 3/13
				Lab Review #7	All work needs to be turned in.