

Medical Informatics Technology Acquisition and Assessment
MED INF 408-DL
Syllabus

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COURSE DESCRIPTION:

In this course, we will cover the entire lifecycle of acquiring information technology and medical informatics products and services, from concept exploration through contract execution, including consideration of organizational dynamics between different stakeholders in the acquisition process.

Our learning topics will include: concept exploration, organizational decision process and change management planning, requirements and specification development, buy vs. build assessments; sole source vs. open procurement models; requests for information (RFI); requests for proposals (RFP); vendor evaluation and selection criteria; principles of effective and ethical negotiations, different foundation business models and contract issues, cost analysis and justification and myriad contract negotiation issues and options.

Texts: Portions from each of the following required texts will be assigned for reading and online discussion, and form the basis of some of the 408 learning objectives. Unassigned chapters from the required books, and the references associated with them, should be reviewed to learn more about issues and solutions the individual student may not have direct experience with. Optional text are for reference only.

1. "Getting Past No: Negotiating in Difficult Situations", Ury, ISBN-13: 978-0553371314 (**required**)
2. "Software Agreements Line by Line: A Detailed Look at Software Contracts and Licenses & How to Change Them to Fit Your Needs"; Overly, et al; ISBN-13: 978-1587623691 (**required**)
3. "Healthcare Information Management Systems. Cases, Strategies, and Solutions" Marion Ball, Charlotte Weaver and Joan Keiel. Thirds Edition. Springer Publications, ISBN-10: 0387408053 (**optional**)
4. "The Book of Standard Legal Business Agreements, Contracts and Forms for Computer Software Programming, IT, and Web Site Design & Development"; Platinum Millennium Publishing; ISBN-13: 978-0971339897 (**optional**)
5. Working with Contracts: What Law School Doesn't Teach You; Fox; ISBN-13: 9781402401589 (**optional**)
6. United States Government Federal Acquisition Regulation (FAR) (**optional**):
<http://www.acquisition.gov/far/>
7. "Negotiating and Drafting Contract Boilerplate", Stark; ISBN-13: 978-1588521057(**optional**)
8. "Negotiation: Your Mentor and Guide to Doing Business Effectively", Harvard Business Essentials, Harvard Business School Press, ISBN_13: 978-1-59139-111-1 (**optional**)
9. NICHSR primer on healthcare technology assessment (**optional**):
http://www.nlm.nih.gov/nichsr/hta101/ta101_c1.html

Student Goals:

- 1 Understand the business imperatives and commitments needed for a major information technology acquisition.
- 2 Acquire a working knowledge of organizational dynamics, due diligence requirements and purchasing

- alternatives to consider before engaging in the acquisition of major information technology products or services;
- 3 Develop an understanding of the strengths and weaknesses of the various types of contracts and/or license agreements that can be used in a technology acquisition, and the legal and business issues that drive contracting decisions;
 - 4 Enable students to work in teams to formally evaluate and assess the vendor options at their disposal for acquiring information technology products and services, including handling RFPs;
 - 5 Equip students with the skills to negotiate fair and ethical contracts which beneficially serve the business needs and missions of all parties involved; and
 - 6 Prepare students with the core knowledge and critical thinking skills which can enable creative, incentive-based acquisitions and contracts.

Prerequisites:

No specific classes, however, students should be familiar with the information systems development life cycle; capital vs. operational budget management; and overall principles and terms associated with contracting. Students should also be familiar with overall information systems architectures, and the labor roles associated with maintaining and enhancing those architectures. . It is recommended that this course be taken later in the MMI program.

Teaching Method:

A case study/solution presentation model will be used by teams of students selected for a mix of skill sets and experience. Online synchronous class discussions will be augmented with additional reading materials. The course content will be delivered via online PowerPoint slides; assigned readings from text books and articles; and online Blackboard discussions. Selected external experts may teach and/or augment specific sessions. Each student will be asked to lead an online discussion and to summarize that discussion on Blackboard's Discussion Board.

Assignments:

There will be four (4) group Assignments and four (4) brief group presentations in MMI 408:

The Instructors will divide the 408 class into groups of students and each Group will be assigned a Case Study. The group will use their assigned Case Study as the basis for four (4) separate Assignments. Each Assignment requires a written paper and presentation to the entire class as they progress through the courses' sessions.

Each of the four Assignments will reflect a different part of the technology acquisition lifecycle process and creative solutions to organizational dynamics that crop up in the process. At the conclusion of the 408 course, each group of students will have worked through the entire lifecycle of acquiring information technology and/or medical informatics products and services, from concept exploration through contract negotiation and execution, and will have made four (4) presentations to the class during online sessions. Students should peruse the required textbooks for topics specific to their Case Study and/or assignment.

Final Exam:

There is no final exam.

Evaluation Method:

Students will be evaluated using the following criteria:

Assignment #1 = 15%... 60 pts

Assignment #2 = 20%... 80 pts
Assignment #3 = 20%... 80 pts
Assignment #4 = 20%... 80 pts
Peer Assessments of all 4 student presentations and team participants
Class Participation = 25%... 100 pts

There are five factors that contribute to the class participation grade:

1. Contribution to the online discussion boards
2. Leadership in your assigned discussion board
3. Review of the online lectures
4. Attendance during the online sessions
5. Peer evaluation or assessment

Total of 400 points

Course Schedule Online Synchronous Meetings are Tuesdays, 7-9:00.

All readings from the text and articles listed online are to be prepared in advance.

Note: Some weeks may not have a Sync Session. Your Instructor will indicate the exact schedule during the first Sync Session and will post a course calendar.

Note: Because the assigned readings are due on the date indicated on the schedule, you need to read ahead. Articles and discussion questions are listed in the online course management system.

Sessions

Below, you will find a quick reference guide to the topics to be covered in each session. Specific requirements and assignment will be covered in the course calendar.

Online contributions will be evaluated on relevance to the topic, use of cited data or information, and degree of creative thinking.

Assignments will be evaluated on the content, format, depth of analysis, and evidence of thought which combines recognized best practices with new, creative ideas from the students; as well as the quality of the presentation. Individual group members will be evaluated based upon their participation in discussions (class and group participation) and by peer assessment.

Session 1 – Overview of the Acquisition Lifecycle This class will provide a summary overview of the entire course, the case studies and the assignments. We will discuss the steps and decisions which precede an acquisition to ensure that, in fact, an acquisition is appropriate and well-conceived from the beginning. The class will also cover the remaining four basic steps in a technology acquisition, including acquisition options assessment, contracting and procurement, execution and implementation, and support and evolution.

Session 2 Acquisition Planning

This session will cover the details of an acquisition plan, including the organizational responsibilities, budget strategy, scheduling considerations, building a criteria-based options assessment for assessing the technology or service to be procured, procurement models, contract options assessments, and preparing a Request for Information (RFI). Specifics to be reviewed are:

- Exploring the differences between software, hardware, services, and systems acquisition and tailoring the Acquisition Plan accordingly
- Outlining the contents of a good acquisition plan
- Building the acquisition team

- Role of the IS/Informatics organization
- Role of the business/clinical sponsor
- Role of the finance department
- Role of the legal department
- Communicating the acquisition
- Scoping the acquisition
- Outlining the contents of an RFI

Session 3 Building the Request for Proposal

This session will cover the overall design, structure, and content of a high-quality Request for Proposal (RFP), including the scope and expectations, timelines, evaluation criteria, choosing the contract type, binary vs. negotiable terms and conditions in the acquisition, the role of standards and metrics to clarify expectations, and the expected structure of responses to facilitate rapid and accurate comparisons from disparate vendors, determining which vendors to solicit and the value of pre-defined “Blue Ribbon Vendor” lists in this process. We will also discuss the fundamental differences between RFPs which are destined for software, hardware, services, and systems procurements.

By the end of this session, you will be able to:

- Identify the correct design, structure, and content of a high-quality Request for Proposal (RFP)
- Explain the fundamental differences between RFPs which are destined for software, hardware, services, and systems procurements

Session 4 Acquisition Procurement Rules and Preparing for Negotiations

This class will discuss the proposal evaluation process including who should be involved, how to communicate with and ask for clarifications from vendors during this phase, evaluating subjective and objective aspects of the RFP, the parallels between evaluating an RFP to assessing a resume and hiring an employee. This class will contrast outdated negotiation techniques based in secrecy and distrust with those techniques which encourages transparency and a mutual commitment from all parties to create an acquisition contract which is mutually beneficial.

By the end of this session, you will be able to:

- Compare and contrast procurement models used by state, local, municipal and federal governments
- Explain how a GPO operates and how it contributes to the healthcare system
- Describe the key elements of a competitive bid process

Session 5 Building the Contract

In this class we will begin the detailed discussion of contract types, good and bad contracting terms for each, the importance of accurate estimating techniques including the use of metrics to remove uncertainty in scope, service level guarantees, protecting each party from the errors and mistakes of the other, warranties and indemnification, and payment models which share risk. We will also discuss models for software licensing contracts which create incentives for mutual success to the vendor and customer.

By the end of this session, you will be able to:

- Identify contract types and good and bad contracting terms for each
- Explain the importance of accurate estimating techniques including metrics, service level guarantees, warranties and indemnification, and payment models which share risk
- Recognize models for software licensing contracts

Session 6 Software Agreements & Licenses

This is a continuation of the previous class. Topics include the detailed discussion of contract types, good and bad contracting terms for each, the importance of accurate estimating techniques including the use of metrics to remove uncertainty in scope, service level guarantees, protecting each party from the errors and mistakes of the other, warranties and indemnification, and payment models which share risk. We will also discuss models for software licensing contracts which create incentives for mutual success to the vendor and customer.

By the end of this session, you will be able to:

- Identify contract types and good and bad contracting terms for each

- Explain the importance of accurate estimating techniques including metrics, service level guarantees, warranties and indemnification, and payment models which share risk
- Recognize models for software licensing contracts

Session 7 Perspectives on Vendor Contracting and Negotiations

This class will cover the essence of negotiating; i.e., risk management for both parties and how to leverage risk concepts in the inevitable give-and-take of concessions in contract negotiations. Topics will include incentive clauses that share risk; measurable service levels in the various phases of performance; the logistics of negotiations to ensure clarity; conducting parallel negotiations with multiple vendors to ensure the existence of a viable option in the event of failed negotiations; the role of metrics as a means of achieving clarity; ensuring that long term support and maintenance are well defined; and the increasingly important role of transparency in an era of information availability.

By the end of this session, you will be able to:

- Explain risk management for negotiating and how to leverage risk concepts in contract negotiations
- Identify incentive clauses that share risk, the logistics of negotiations and use of metrics to ensure clarity
- Interpret the increasingly important role of transparency in an era of information availability

Session 8 Perspectives on Vendor Contracting and Negotiations (part 2)

See previous section.

Session 9 Contract Award

In this class, we will discuss the process of selecting a final vendor and winning a final contract; how to notify winners and losers; the steps that should follow the contract award in order to begin the next phases of the project. We will also summarize the salient points from the previous week's with the intent of leaving the students with a checklist of best practices, tips, and examples to ensure their success in real-world acquisitions.

By the end of this session, you will be able to:

- Explain the process of notifying contract winners and losers
- Identify the steps that follow the contract award to begin the next phases of the project
- Understand the process of selecting a final vendor

Session 10 Final Class project

This is the last session of the course, so the learning objectives include a comprehensive understanding of each of our four student Groups' case studies and the process by which each Group achieved a successful contract and launched a mutually beneficial business relationship with their chosen vendor.

Additional Instructor's Policies:

Attendance

Students are expected to attend all online sessions. Most of these sessions are for student presentations. You cannot present if you are not online. If you need to miss a session you must inform the instructors and your group peers in advance of the session. If you miss a session, you will be expected to review the recorded session for that week. Attendance during the online session is counted as part of the participation grade.

Late Work

Students will have two weeks to participate in the online discussion forums. After two weeks the forums will be closed and any additional participation will not be counted. Discussion leaders are expected to write their summary three days after the forum has closed. There will be no discussions forums the last week of class. The instructor will provide an end date to the last discussion forum depending on when the class is over.

Since the assignments are all group projects they are expected to be completed on the due dates outlined in the course calendar. Only under very rare circumstances would these dates be extended. Any request for extensions must be made to the instructor as soon as possible.

Work submitted late will have 10 points per day deducted for each day it is late. After two days the assignments will not be accepted and the student will receive zero points for the assignment.

Group Participation

Each student is expected to fully participate in each of the group projects. Students deemed to have not fully participated in group assignments will receive a lower grade than the rest of the group.

University Policy

Students with Disabilities

In compliance with Northwestern University policy and equal access laws, we are available to discuss appropriate academic accommodations you may require as a student with a disability. Request for academic accommodations need to be made during the first week of the quarter, except for unusual circumstances, so arrangements can be made. Students are encouraged to register with Services for Students with Disabilities (SSD) for disability verification and for determination of reasonable academic accommodations. For more information, visit <http://www.northwestern.edu/disability/>

Academic Integrity at Northwestern

Students are expected to comply with University regulations regarding academic integrity. If you are in doubt about what constitutes academic dishonesty, please speak to us before the assignment is due and/or examine the University web site, "How to Avoid Plagiarism at <http://www.northwestern.edu/uacc/plagiar.html>

Academic dishonesty includes, but is not limited to cheating on an exam (e.g., copying others' answers, providing information to others, using a crib sheet) or plagiarism of a paper (e.g., taking material from readings without citation, copying another student's paper). Failure to maintain academic integrity on an assignment will result in a loss of credit for that assignment – at a minimum. Other penalties may also apply. For more information, visit http://www.scs.northwestern.edu/student/issues/academic_integrity.cfm

Sexual Harassment Policy

It is the policy of Northwestern University that no male or female member of the Northwestern community – students, faculty, administrators or staff – may sexually harass any other member of the community. Sexual advances, requests for sexual favors, and other verbal or physical conduct of a sexual nature constitute harassment when: submission to such conduct is made or threatened to be made, either explicitly or implicitly, a term or condition of an individual's employment or education; or submission to or rejection of such conduct is used or threatened to be used as the basis for academic or employment decisions affecting that individual; or such conduct has the purpose or effect of substantially interfering with an individual's academic or professional performance or creating what a reasonable person would sense as an intimidating, hostile, or offensive employment, educational, or living environment.

For more information, visit <http://www.northwestern.edu/sexual-harassment/policy/index.html>

