

ISMT E-202 Capstone Paper

- Purpose
 - The paper describes how information technology helps a company achieve a business objective
- Expectations
 - This is a collaborative effort, where students are expected to demonstrate technical depth, an understanding of business context related to Information Management practices and requirements, and apply knowledge gained in other ALM in IT courses.
- Common Scenario
 - A fictitious company (pick one of your choice, any industry) provides a framework for student projects. Student teams should be formed based on interest and potential scenarios related to topics being discussed in class. Students may invent any scenario and submit it for approval by the professor (in his guise as the CIO or "Pointy Haired Boss").
- Topic
 - Students may choose any class materials, read through industry literature (highly encouraged!), or request a topic from the professor. Samples of student team papers using the approximate style for this course will be made available on the course website. Note that as this is a new course, these papers mainly cover ECM and Enterprise Architecture subjects, but can be used to understand structure of good papers for this course.
- Final paper
 - For this course, your Capstone paper will include four parts:
 - Executive Summary
 - Business Requirements
 - Technical Specification
 - Implementation Plan
 - Each part will be presented by the teams, and discussed in class. The objective is NOT to write something, turn it in, and pray for a good grade. The professor's intent is to simulate actual business practices as closely as possible in the context of the course structure, so requests for feedback from fellow students and teaching assistants is encouraged.
 - The final papers will be presented to the IMS program committee in the final week of class.

RFP (Request for Proposal) Scenario

Action Plan

1. Form your team as quickly as possible. Ideally, each team should designate individuals to act as project planner, developer/technical architect, and other roles as you see fit.
2. Choose a company to write about
 - a. Invent a company (or use a real one that sounds interesting)
 - b. Use an actual I.M. requirement from one or more students ' actual, current (or past) employer. If you can actually solve a real-world business problem as part of this course, go for it.
 - c. Mine some industry documentation or an interesting case study for a project.
 - d. Ask the professor or a TA to help you invent a scenario. This should be the last resort; use your creativity!
3. Choose a topic for the paper
 - a. Respond to a fictitious RFP -- "company X is in need of an information management solution to solve problem Z. Here are their criteria and list of goals for the project for which they're requesting a quote."
 - b. You can be an internal organization, a consulting company, or an I.M vendor.

Teamwork

- As in real-life enterprise level I.T. organizations, student teams will practice the art of teamwork, sharing of workload while combining efforts and cross-industry experience, course knowledge, and general technical skills. For example, some students may bring data modeling, industry best practice, security, networking, or software development skills to the table. Others may have specific industry / requirements knowledge or project management expertise.

Collaboration Tools

- We will provide group work areas within Canvas, so each group will have its own location to store work, message one another, and generally interact. You should use this when possible so we can monitor your progress and watch your product develop over the lifetime of the course.
- You may also choose to use other collaboration tools -- Google Drive, Hangouts, Docs, DropBox, or other capabilities if they make sense. If you do, please add us to your Drive access control list so we can look at work in progress when necessary.

Reading Materials

If you are not familiar with management of I.T. projects, we have put together a list of documents that should help (which are posted on Canvas). Also be sure to use the sample project papers as examples of how to structure your Capstone. You do not need to mimic exactly layouts, fonts, or styles, but should use these as a rough guide. As always, ask if you have further questions.

ICT Service Provider (AKA Student Team) Responsibilities

- **Initial Review.** Providers will review their proposal and topics of interest with the CIO.
- **RFP Proposal and Response.** Each provider will select a project of interest, and submit their proposal (executive summary) to the CIO or one of his deputies in the PMO office (e.g. course TAs). One or more will provide authorization to proceed, or kick the proposal back for more definition.

- Providers are expected to form partnerships, explore innovative ideas, and conduct industry research.
- Suppliers should expect to operate on a global scale. Projects related to small businesses are inappropriate for the course; instead, look for large scale projects relevant to large companies or organizations. Non-profits are fine (many fine projects have come from education or other not-for-profit functions!) but should be appropriately large.
- Be sure to constrain scope to something that can be managed in the context of this course. Don't try to save the world or solve every I.M. problem at once. Pick a manageable, discrete business problem and objective. If you're looking at something with an excessively wide scope, block it off into phase 1, 2, and N. Then just concentrate on phase 1 for the course objectives.
- Providers are expected to implement (and be aware of) current industry technologies. We will discuss some technologies at a high level in lecture, but it's up to providers to perform further research.
- Providers will present their solution to the ICT Change Authorization Board (CAB) once each part of the project is complete. (Note: these reviews are part of assignments 1, 2, and 3).

Capstone Paper Proposal

- Introduce the 'client' company
- Introduce the IM solution provider, whether internal IT team or vendor.
- State the business goal or problem to be solved:
 - Enable a new product or service
 - Fix or improve/streamline a broken process
 - Eliminate redundant work, data, content, etc.
 - Automate an existing I.M process
 - Produce new information to improve decision-making via analytics or other novel uses of information held by or available to the client
 - Increase customer satisfaction or employee productivity
- Offer a technology that will enable the client to reach the goal or resolve the issue
- Explain how this will be implemented
- Explain your arrived-upon success criteria. How will you measure the effectiveness of the project's output once it's put into production?
- Refer to current research in I.M., including industry best practices, news or other sources, competitive analysis results, et. al.
- Once the proposal is approved, it will be submitted to the CIO office as an executive summary (assignment 1)

Grading Criteria

- Correctness
- Completeness
- Depth of analysis and novelty or creativity of the solution
- Level of effort
- Writing quality (note that the CIO is a writer, and expects well written material!)

Grades

- A - excellent, greatly exceeds expectations
- B - good, may need some tweaking to really shine
- C - needs improvement
- You know the rest...

Capstone Paper Outline

Proposal and Executive Summary

- A short statement about the proposed topic. How the I.M. project will help solve a business problem and achieve one or more stated objectives
- References to research, competitive analysis, and industry sources as appropriate
- *Deliverable*: Proposal of 2-3 pages (assignment 1)

Part 1: Business Requirements

- As-is and to-be business process descriptions
- Required functionality
- Business benefit justification
- Success metrics
- *Deliverable*: statement of business requirements, 3-6 pages (assignment 2)

Part 2: Technical Specification and Prototype

- Architectural approach, including a high level conceptual diagram
- Software solution (if appropriate)
- Integration with or replacement strategy for existing content repositories, applications, processes, procedures.
- Solution demonstration. Students may use PowerPoint, create a website mockup, or customize an existing vendor demo.
- *Deliverable*: technical specification of 6-10 pages (assignment 3)

Part 3: Implementation Plan

- System deployment plan, including basic timetable and deliverables (note: any detailed project schedules should be relegated to an appendix or other artifact!).
- Operational governance: stakeholders, resources, and dependencies.
- User enablement: how will the results affect users, what will change, and how will enablement be handled.
- Success metrics: how the results will be measured and reported on, qualitatively or quantitatively
- *Deliverable*: implementation plan, 3-6 pages (assignment 4)

Final Presentation

Written paper submitted for grading

You will deliver an oral presentation to the IMS program committee (PowerPoint, Prezi, etc.)

Deliverables: final paper, including executive summary and parts 1-3, and the presentation graphical materials.