Course Syllabus
ISYS 5433: Enterprise Systems
Spring 2018

Course Links

All links active on electronic version of syllabus on Blackboard

Go directly to:

Case Discussions   **Case Write-Ups**

GROUP PROJECT: Web Site **Evaluation** **Mid-term Exam**

Final Examination   **General Participation/Attendance/Professionalism**

Course Schedule

Course Information

Instructor: Dr. Varun Grover, David D. Glass Endowed Chair and Distinguished Professor**,** Department of Information Systems,
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Official Class Hours: Tuesdays (2:00-4:45pm) in Willard J. Walker Hall 0403.

Office hours: Tuesdays, after class (4:45-6:00pm + by appointment/schedule via e-mail)

Blackboard: http://learn.uark.edu

Course Description

Enterprise Systems comprises the information technology and systems that support the mission of the company including decision support and business processes. This managerial enterprise systems course focuses on strategic issues of information technology. Students study the various elements and integration of an organization's business processes; as a result, students gain an understanding and working knowledge of systems used to support these business processes and their use in decision making. In addition, students will study concepts and develop skills needed to utilize decision-centric business intelligence and knowledge management applications.

Today's Environment: IT and Digital are Critical

This is a remarkable time. Mankind is consuming digital information in the order of Zetabytes (a billion million billion bytes). Information Technology (IT) is embedded in almost everything we do. For businesses this trend is dramatically influencing productivity and the customer experience. E-Commerce, Social Media, Big Data, Analytics, Mobility, Cloud, Internet of Things – are just some of the buzz words that represent the ongoing impact of information technologies. It is remarkable to observe the digital transformation that has taken place, particularly over the past decade. From the industrial revolution of the past century, we are now in the midst of an information and knowledge revolution that is fundamentally changing industries and the way we compete. We are at a point in Moore's Law where the doubling of computing power and corresponding capabilities is far outperforming our ability to take advantage of them. Computing and communication technologies are converging at lower costs and transforming business strategy and business processes. Assumptions we have about business and economics are being challenged.   It is clear that the forces of change are strong and if we want to succeed in business, we need to understand them and leverage them to our (individual and corporate) advantage.

If we look at the primary focus of IT application in business, it has evolved from transaction processing to managerial information to decision support to strategic/competitive uses to an enterprise orientation, and most recently to the import of social interactions. Further, with global standards, a marketplace that permits competition from around the globe has emerged. Companies need to think globally but act locally - making the term "global village" apt. Further, labor markets are demanding more skilled labor, as certain jobs are being replaced by machines Many organizations are realizing the tremendous implications of today's ITs through the restructuring and reengineering of their business and the management of upstream and downstream supply chains. Companies that can build their knowledge-base, structures, and strategies to take advantage of digitization, are the ones that are going to survive and thrive.

The omnipresence of ITs in business is becoming evident at the individual level (knowledge work, mobility and productivity), the group level (virtual teams, social networks), the organizational level (processes and strategy), and the inter-organizational level (e-markets, supply chains) especially given the prominence of Web based technologies. As industries are propelled by this technological catalyst into the "information age", it is becoming imperative that every manager in an organization recognize the potential leverage that ITs can provide in improving business. Growing expectations of increasingly tech-savvy consumers are pushing organizations to innovate with IT. However, as indicated by a recent research study conducted by MIT and Cap Gemini, despite a growing

acknowledgement of the importance of digital transformation, most companies lack the management experience and temperament to drive technology initiatives. Very few (less than 15%) have managers that understand the strategic issues with IT and digital, and the vast majority did not inculcate these initiatives and culture in their managers and employees. Some organizations tend to lack urgency and in many cases resist effective deployment of IT. Some don't have a good shared understanding between business and IT professionals. Others deploy IT (e.g., web sites) without thinking strategically through the business implications of the deployment, as clearly evidenced by the dot.com bust in the not too distant past.

While numerous frameworks, cases and concepts have been prescribed to structure the "chaos," much work needs to be done before any prescriptive panacea can emerge. However, with IT accounting for over 50% of capital goods dollars, well over 2 trillion dollars by some estimates, there is no greater imperative than the need for managers *regardless of their functional orientation* to understand the dynamics of our evolving digital world...or to have their companies eventually fail.

Look at the quotes from some prominent executives:

Procter and Gamble CIO Filippo Passerini: "We want (the IT component) to become change agents for Procter and Gamble and transform the way business is done.....P&G's CEO, Bob McDonald, has made it a mission of the firm to become the best tech-enabled company in the world, in order to achieve its business goals"

FedEx CEO Fred Smith: "(Since IT has) become such a strategic issue, you have to think quicker and act more efficiently in a manner that affects the business more profoundly than in the past."

E.&J. Gallo Winery CIO Kent Kushar, whose company ranked No. 1 on InformationWeek 500 list: "A child using a hammer and chisel doesn't make nice sculptures. But look at what Michelangelo did. The tools may be commodities, but how you use them is not."

Starbucks CIO Curt Garner: "IT and digital is pervasive in people's lives now. So the advice I would give somebody starting now is think of yourself like a consumer technology company."

The vast majority of the IT represented in medium-large organizations are represented by a variety of **enterprise systems**. These systems can be broadly classified as operational, decision-oriented, data-oriented and network-oriented systems. They comprise the IT that supports the business strategy and processes. Understanding what these systems are and how they contribute to the creation of business value, is fundamental to navigation in the evolving digital age. These systems will be the focus of this course.

Objectives

This course takes the perspective of a general manager, not a computer programmer, systems analyst, IS manager, or computer scientist.   Managers need to deal with an evolving myriad of enterprise systems that are digitalizing business. And, they have to do so astutely. Further, with

the increasing pervasiveness of ITs, understanding such systems is becoming relevant to almost any organizational stakeholder. Governance of technology is no longer exclusively for IS executives – and even these executives often come from non-IT backgrounds (e.g., Doug Merrill former CIO of Google came from Psychology while Tom Murphy, CIO of Royal Caribbean had a degree in English literature). Increasingly as IT and business are tightly interwoven, the responsibility of doing it right falls jointly on IS and other managers - and in many cases under the sole purview of the business managers. So as an organizational stakeholder in general or a manager in particular, you need to have a perspective and insight into these issues. **This course is for the _thinking manager_ who needs to cope with business issues in the digital age.**

You will leave this course with an understanding of the opportunities and threats posed by enterprise systems – as IT and digitization play an instrumental role in contemporary competitive environments. There are no simple answers to the issues raised. IT is characterized by dynamism and complexity, which gives rise to uncertainty in our ability to cope with it. Hopefully, on completion of the course, _you will have a good understanding of the systems involved, the issues, know the right questions to ask and have the background to search for the answers_. This background will be very important in your career where you will need to strategically evaluate the growing set of modern systems, and as you interact with IT professionals in leveraging the business power of these technologies as well as their digital manifestations.

The learning objectives of the course are for you to:

- ✓ **have the ability to define, describe, identify, memorize, recall, explain and illustrate the enterprise information systems that form the basis of digitization in a business context**. This will enhance future ability to converse with IS-personnel on the information technologies themselves as well as their use in business. In order to do this you need to be familiar with the different kinds of enterprise systems commonly used in business, such as transaction processing systems, database management systems, decision support and executive information systems, expert systems, and network and Internet systems, including their trends (cloud computing, big data, social media, analytics) and use in business, as the digital environment continues to evolve.

- ✓ **have the ability to develop and assess strategies pertaining to the use of enterprise systems in business contexts.** This is based on fundamental building blocks of strategic and digital thinking.

- ✓ **have the ability to evaluate the use of information technologies in business contexts.** This makes you a more informed manager with a sophisticated awareness of digital economics and the rich variety of managerial issues raised by information systems and the paradigm shift as we move rapidly into the digital age. This will include an understanding of the strategic impacts of systems on competitive advantage, electronic commerce, markets, and industry transformation.

- ✓ **have the ability to critically think (assess and evaluate) about IT value** by exploring more through in-depth research on a contemporary issue pertaining to enterprise systems.

From the above discussion, it should be apparent that this course deals with substantive managerial issues rather than programming ones. It is therefore appropriately taught in a business school rather than engineering or computer science. The course emphasizes systematic thinking, components of information systems, and the various roles of IT and information systems can play in an organization. It will provide the foundation so that you can recognize the circumstances in which these systems can be applied to increase productivity and organizational effectiveness. **The course content is current and reflects the important digital phenomena taking place in contemporary organizations.**

Enterprise (Information Systems)

As discussed above, we will not be concerned with information technology alone. We will not even be concerned with information technology primarily. We will go through a basic understanding of types of enterprise information systems and technologies and then proceed to examine the more difficult matter of how a business organization can (a) use the system in efficient and effective ways "to make money," "to gain a competitive edge," and (b) leverage the economic advantages of digitization to "to add value," "to innovate," "to share resources," "to transform markets," "to improve customer experience," or to "effectively deploy e-commerce." In other words, an Information System is the basic unit that includes IT and is objective oriented. It is embedded in a context (see Figure below). It consists of not only information technology, i.e., hardware and software, but also people who use, develop, maintain, and manage the hardware and software; the procedures or processes by which both the people and the technology carry out work (which include, but are not restricted to, procedures and processes pertaining to hardware and software); and the data or information which the overall system stores, processes, and retrieves. An information system is more than just "the computer." In fact, in some information-technology applications involving e-mail, social media and electronic commerce, limited or no "computing" or "computation" takes place – but the system when managed in the right context can foster efficiencies, growth and innovation through digitization.
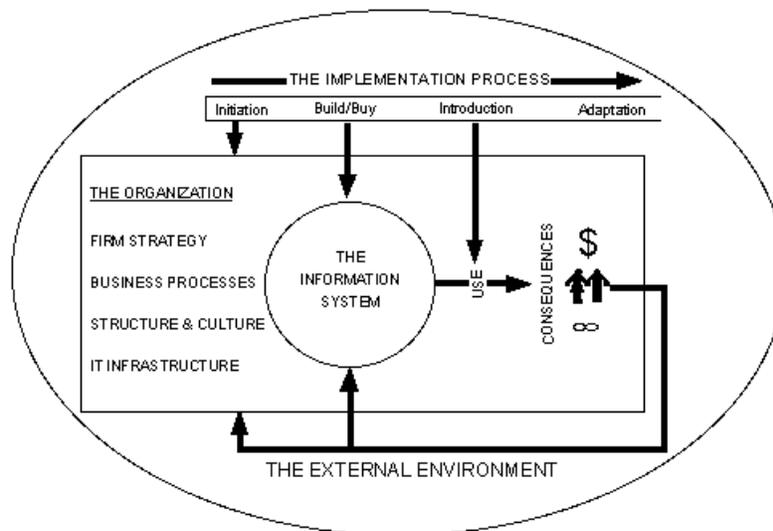
Course Approach

This class will be conducted in both lecture and seminar format to encourage the exchange and synthesis of unstructured ideas. I will structure and present the material in a manner conducive to understanding. **It is your responsibility to read the assigned materials.** I do not regurgitate material from any book, but present it with additional material from diverse perspectives. **Pay attention in class.** The duration of this class (almost 3 hours) might make it difficult to do this. While we will take a break around halfway through class and on occasion change the format (i.e., do cases), it is important for you to pay attention and take good notes. Think of issues and their resolution. Focus on understanding rather than rote memorization. We will together proceed to critically evaluate the current thinking in the field. Frameworks, Harvard-type cases and anecdotes will be discussed in the attempt to structure a disparate area. Keep in mind that we are following a tight weekly schedule, which requires significant effort/time on your part.

Reading Material

There are two parts to this course. The first part deals with enterprise systems and the fundamental information technologies behind digitization. It represents a basic understanding of enterprise systems and associated concepts from a managerial perspective. I will go through these concepts systematically in class.   While there is no assigned text book, I have provided additional readings, videos, hands-on demos, etc. in the online version of the **course schedule** to complement our class discussion. You will need to go to (or download) the pdf version of the syllabus to click on these links. These materials might be updated through the course….and I will inform you of any updates and recommended materials in class. Use these materials to enhance your understanding of what we do in class. It is usually a good idea to revisit class concepts, along with the associated material *after* the class session. The second part consists of managerial aspects – things that a thinking manager should be aware of in dealing with all this IT, which is digitalizing business, and its manifestations. I have a compiled a set of carefully selected readings that will take the place of a formal book. These readings represent Harvard Business Review, Sloan Management Review & other articles that provide key insights into leading edge thinking on management issues in the information age. Many of the readings are recent (post-2010) but earlier readings are included if they cover fundamental concepts that are still very relevant for understanding contemporary IT issues.

For each component of the course, I reserve the right to add additional material to the syllabus that will be accessible on Blackboard (as a reading) or through a hyperlink in the online version of the syllabus. These are intended to reinforce, illustrate or extend your understanding of key class concepts.

Evaluation

Grades will be based on the following scheme:

Participation	10%
IT Matters Website	15%
Case Write-Up	10%
Mid-term Exam	25%
Final Examination	35%
Attendance/Professionalism	5%

Grading will be based on a standard scale:
(A=90+, B=80+, C=70+, D=60+, F=60-)

Course Components

Case Discussion & Summary Write-Ups

We will discuss multiple (2-3) cases in this course.   The cases will be positioned roughly with respect to material covered on the schedule, but the actual date will be announced at least one week in advance in class. The cases will be made available to you at that time. It is your responsibility to prepare them for discussion in class on the due date.

Your primary objective in analyzing a case is to frame and interpret the broad questions provided. I will provide the broad questions. You need to then parse the question down into specific issues and the facts surrounding the issue. Try to apply systematic thinking to best interpret the issue and its resolution in light of the facts provided. Try to zero in on the reasons why the issue is an issue and those insights might lead to a logical conclusion.   You must ask yourself ... "What is the core issue I need to address and what evince do I need form the case to support my conclusion." Often, the toughest part of a case analysis is to separate the relevant facts from the other "stuff." And then to coherently organize it, with your interpretation, in order to make a "case" for your conclusion.   In doing so:

(1) Read the case very carefully. Try to put yourself in the shoes of the person(s) involved and develop a sense of involvement in the issue(s). (2) 3. Focus on the key question(s) and try to get a sense of what is required. Focus on interpreting and analyzing the question, using case facts to support your analysis.   Distinguish between problems and symptoms. (For instance, slow thruput in processing of transactions could be a symptom of an employee morale problem or a slow computer problem).   Apply class material to frame your response and argue for your position. (3) Logically (systematically) derive a response to the question(s), making sure that you minimize regurgitation of the case. If there is a conclusion or recommendation required, make sure that it is clearly stated and your analysis logically leads up to it.

For at least one of the cases, an individual write-up will be required. Each student will submit a one-page single spaced write-up that summarizes the most direct answer to the case question. Appropriate use (not forced use) of class material can facilitate analysis. These will be graded as follows:

A level = Considerable thought went into the responses. Question was clearly assessed through a logical analysis of the case facts (grade here would be A or A-)

B level = Some thought went into the response. All facets were not covered or the analysis lacked some logic and consistency or question not fully addressed (grade here would be B+ or B)

C level = Most of the case was regurgitation of case facts with limited analysis or failure to address question (grade here would be a C)

F level = Totally unacceptable response (grade here would be an F)

BE PREPARED TO DISCUSS THE CASES IN CLASS ON THE SCHEDULED DATE.

Remember, in a case discussion, YOU carry the load. Some answers don't necessarily have an easy right or wrong – you will need to take a position and argue for it. I reserve the right to pick students at random for discussion of the case. In cases of obvious lack of preparation, the student's name will be noted. In contrast, constructive comments will be rewarded. I look for us to collectively build a logical flow of argument with evidence so that we can make a case to address the key question. In such analysis I look at the thought process involved and not the nonexistent "right answer."

GROUP PROJECT: Why IT Matters Web Site (Hands on)

This is a GROUP project. Each group should have 3 members. Try and have at least one member who has some familiarity with creating and posting a website.

The objective of this exercise is to challenge a couple of articles by Carr that came out some time ago (in 2003 and 2005) that argued that IT does not matter. These articles created a lot of controversy, since they were based on a coherent set of arguments. Technology leaders, academics, politicians, journalists – all aggressively voiced varied opinions of the validity of his arguments. Now, with the buzz down, and a few years more of technology evolution, t is an appropriate time to take stock of the question of whether IT matters – can it create and sustain a competitive advantage. This course is largely a rebuttal of Carr – since the course largely advocates IT. However, can you draw from this course to formulate good rebuttal arguments – that can be illustrated with compelling examples from business.

#1: Carefully read Carr's 2003 and 2005 articles entitled "IT Doesn't Matter" and "The End of Corporate Computing." Also, look over his **blog** (2009).

#2: Think carefully about Carr's arguments and the various technologies and frameworks for strategic thinking and digitization we have discussed in class. In one of our major modules, we have discussed the strategic impact of IT suggesting that IT does matter… and it matters a lot. Some companies have built competitive advantage based on IT and are able to sustain it through continuous innovation. We also discussed how companies can exploit digital economics. Also, over the past five years, we have seen a dramatic proliferation of Web-based initiatives.

Businesses, information providers, researchers and consumers in their diverse roles have been building applications and utilizing the growing omnipresence of the Internet in ways that enhance their utility. As such, Internet has now reached a "critical mass" of participation that can (and is) being leveraged by numerous entities with diverse interests.   We have also discussed how managers should think strategically about their (corporate) IT resources and foster barriers to sustain their advantage.

#3: Assignment: I would like you to reconcile the difference between the above and Carr's views by constructing a thoughtful Webpage on "Why IT Matters." This page should be no more than the equivalent of 1 regular single-spaced page but should hyperlink to other pages that clearly illustrate cases (companies) where IT and digitization is a clear source of competitive advantage (and needs to be managed well in the company like many other resources). In other words, your charter is to provide a reader of your page a compelling argument and illustrations of why IT matters.

The way you organize and present your arguments is entirely up to you. Be creative. You can choose to take the main tenets of Carr's arguments and refute the point by point with clear and powerful illustrations. Or you can use frameworks and illustrations that describe how IT and digitization is being used by companies to reach new markets, transform their industry, exploit social capital, leverage alliances, change relationships with customers, leverage their platform or ecosystem, create novel insight through big data or analytics, etc.

You can use any structure/links that illustrate your point. This will require at least 2 quality illustrations (there could be more) of companies where IT was an undisputable source of competitive advantage. Integrate the sites of your selected companies into the page, providing a clear discussion of why you think they are *strategic*, *innovative*, and a *source of competitive advantage* for the firm. Don't just provide links to the company websites without an intermediary page that makes your illustration clear.   Examine a number of possible candidates before making your final selection. Evaluating a few companies in the same industry could give you a better comparative basis for one company. *It is important to note that the focal examples should not be companies that provide generic IT (e.g., Microsoft) but companies that use IT and digitization in a way that matters. (Hint: Don't just focus only on what the IT does – but the compelling implications for why other companies may not be able to replicate that initiative and seize the advantage).*

Please note that I want your original thinking. Do not directly use ideas from any articles or discussions you might find on this topic without full attribution. Also, it would be more effective if you can use illustrations of successful systems/applications that are less well known (even though the companies might be well known). You will be evaluated based upon the extent to which a reader of your project concludes that "aha – now I'm convinced that Carr was wrong – IT does matter. These illustrations demonstrate that IT and digitization can substantively give a company competitive advantage." This assignment will be due close to the end of the semester.

Creating A Website
Creating a Web site is straightforward. If you are new to doing this, perhaps you can partner with someone who has experience. However, you can create the site using Microsoft Word. You can use various sites that provide free services (like Nvu, Wix, Weebly). The best option for you to host is to use the public space provided for you by UArk OR create a directory for your group on Blackboard or in a public folder on DropBox or Box, and submit all your files there. Then send me an e-mail (vgrover@uark.edu) with the link e to be opened. Alternatively, if you have your own space, you can post your page and simply e-mail me the link (url).

Exams

Mid-Term Exam

This quiz will be after the first half of the course and will focus on your understanding of the more systems/technical concepts. The format will be objective. To do well, make sure you take good notes, review these after every class, and clarify any ambiguities.

Final Examination

The final examination is a very important evaluative component of the course. It is cumulative and consists of two distinct parts. Part 1 is objective, and focuses more on conceptual understanding of the material (things a manager should know regarding IT and managerial concepts). Part 2 will be application oriented (tests the ability to apply the concepts) and will include essay questions, case scenarios, etc. Use the readings and your notes collectively - to complement each other in your preparation. Questions on the cases you prepared could be included. The final exam will be scheduled on the official exam day or possibly on the last day of class.

Technology Sharing/Practice News Clips

To link and enhance the material in class with what occurs in contemporary practice if I come across something interesting and relevant in the news , I might send it to you. The purpose of these clips is two-fold (1) to keep you abreast of interesting practical applications and trends, and (2) illustrate how IT can change business value. I expect you to read the clippings, and I might have a general question on the clippings in the final exam.

Professionalism and General Participation

Interest, attendance, and professionalism will be informally evaluated during class. Remember, the objective is for you to learn! Failure to pay attention (e.g., focusing on your phone; talking with another student) or maintain professional behavior (e.g., walking in late to class or leaving class without prior notification; cell phone going off in class; being argumentative or disruptive) could severely impact your performance. A portion of your grade is reserved for professionalism.

Any comment or question that facilitates learning is welcome. I will often raise questions on the material or speculate on where we are going. We will also discuss cases. Avail of those opportunities to participate. Of particular interest, is the sharing of examples in class of companies that illustrate a concept or framework discussed in the previous class or further information on any digital example you experienced. These examples can be found in the popular press or can be a result of personal experiences. In contrast, "participation" that is irrelevant, destructive or deals with issues that can be better resolved in a private forum will not be welcomed. Cell phones should be turned off or on "vibrate." Other course policies are described below in this document.

Blackboard

The Blackboard (learn.uark.edu) resource for this course will be utilized. The following features will possibly be used:

- Special Announcements: Any announcements pertaining to weather, changes in schedule, etc.
- MyFiles: Students can post their projects and cases in their assignments folder
- Handouts: Readings are placed in the content system
- Communication: Email

Course Policies

Attendance: The class is a forum for learning. It is to your benefit to attend regularly and try to assimilate the material. While I do not have a specific attendance policy for this course, it is expected that you will not miss any class. The material discussed in class is the most important component of the course. If unforeseen circumstances prevent you from attending class, please inform me in advance. Under this eventuality, you are responsible for all material covered in that class as well as assignments due or any announcement made.

If I am significantly late for class, I expect the class to wait for a period of 20 minutes before disbanding (unless you receive notification). Periodically check the Blackboard space for any announcements.

Missing Assignments/Exams: If you are unable to take the exams or you fail to do an assignment, a zero will be assigned to your grade. This will have a dramatic and adverse effect on your grade for the course. Only under exceptional circumstances (e.g., if you take the exam you will die) will consideration be given, if you see me ASAP.

Devices in Class: I would prefer that you focus on the class itself and **not use** your laptops or smart devices while in class. However, the exception to this is only for taking notes pertaining to class content. **In-class use of laptops for work outside of class (including, but not limited to e-mail, chat, web-browsing, and preparing assignments during class-time) is prohibited. Cell phones should be turned off or on "vibrate."**

Academic Integrity:
"As a core part of its mission, the University of Arkansas provides students with the opportunity to further their educational goals through programs of study and research in an environment that promotes freedom of inquiry and academic responsibility. Accomplishing this mission is only possible when intellectual honesty and individual integrity prevail. Each University of Arkansas student is required to be familiar with and abide by the University's 'Academic Integrity Policy'. Students with questions about how these policies apply to a particular course or assignment should immediately contact their instructor."

For more information on academic integrity, see http://provost.uark.edu/academicintegrity/462.php.

Accommodation for Students with Disabilities: It is the Walton College policy that reasonable accommodations will be made for students with disabilities. Students must request any accommodations from their instructor in addition to requesting accommodations from the Center for Students with Disabilities (CSD). Please contact the CSD for details on seeking accommodations for disabilities

Acronym Support

IS seems to be the producer of many acronyms that seem to elude definition. However, since professionals in the field toss them around so liberally, you might want to know what some of them mean. One resource that you may find useful is **http://www.acronymfinder.com**.

Note

On a final note, if you have any concerns or problems during the course, feel free to talk to me. I am not unreasonable and will attempt to resolve them to the best of my ability. You can see me after class during office hours, or you can e-mail me to set up an appointment. But, perhaps the best way to get a response to a quick question or concern is through e-mail (vgrover@uark.edu). It usually works better than you might think!!!! (Any email pertaining to this class should have the course number 5433 in the subject line)

Tentative Course Schedule

■ **The course schedule and cases are** <u>tentative</u> **and might change during the semester. Additional readings might be assigned during the course. Cases will be announced and made accessible at least one week before the discussion date.**

■ **The readings are intended to complement our class discussion (i.e., enhance your understanding). What we do in class will be primary. You best approach would be to review your notes & any associated readings after each class session.**

Session	Topics	Readings for this session
Week 1 (1/16)	**SYSTEMS THINKING AND BASIC CONCEPTS OF INFORMATION SYSTEMS** Introduction, Fundamental Systems Theory Information Systems Fundamentals: Definition, Data vs. Information	See www.whatis.com for technical definitions throughout the course
Week 2 (1/23)	The Evolution toward Knowledge and Knowledge Management **INTRODUCTION TO THE FOUR BASIC ENTERPRISE SYSTEM TYPES:** ➢ **Operational (ERP) IS** ➢ **Decision (Analytics) IS** ➢ **Data (Big Data) IS** ➢ **Network (Web) IS** **Open Discussion, Cases, Trends, Applications**	**Read about** <u>Knowledge Management Definitions and Solutions</u> Three Short Animated Videos on Knowledge Management: <u>What is KM</u> and <u>KM in Projects.</u> Pitch for <u>KM Software</u>. **Case Study:** Catching a Plane
Week 3 (1/30)	**Operational IS** Basic System Concepts: Transaction Processing Systems (TPS, ERP) **Open Discussion, Cases, Trends, Applications** • Services • Cloud	**Read about** <u>ERP Definitions and Solutions</u> Short Videos on <u>ERP</u>, <u>ERP Software</u>, <u>Talk</u>, <u>ERP Demo</u> **Read about** <u>Service Oriented Architecture</u> **and** <u>Cloud Computing</u> Short Videos on <u>SOA</u> and <u>SOA for Dummies</u> and <u>SOA</u>

	• Blockchain	Short Video illustrations of Cloud Computing and the 3 types with examples Short Video on blockchain Simple Demonstrations of Web Services to Identify IP, zip code, etc. for fraud detection – here. Readings: What Every CEO Needs to know about Cloud, McAfee, November 2011, *Harvard Business Review* The Truth about Blockchain, Jan-Feb 2017, *Harvard Business Review*
Week 4 (2/6)	**Analytics IS** Basic System Concepts: Decision Support Systems (DSS, Descriptive, Predictive, Prescriptive Analytics) **Open Discussion, Cases, Trends, Applications** • AI and Machine Learning	Read about: Decision Support Systems **and** Analytics See Medical Symptom Checker here Video of Colorado's DSS Expert System here Read: Reshaping Business with Artificial Intelligence
Week 5 (2/13)	**BUFFER**	
Week 6 (2/20)	**Data IS** Basic System Concepts: DBMS **Open Discussion, Cases, Trends, Applications** • Big Data Systems • OLAP • Visual Analytics • Dashboards	Read: Database Tutorial Video on Benefits of Data warehousing Short Videos that Demonstrate Dashboards/Analytics. Also here Big Data and SAS Visual Analytics Read: Breaking Down Data Silos, *Harvard Business Review*, 2016 Video Discussion of Practitioners involved with Big Data and Analytics. Also see Data Enterprise

Week 7 (2/27)	**Network IS** Basic System Concepts: Network & Internet Systems (Standard, Secure, Reliable Network) **Open Discussion, Cases, Trends, Applications** - Social - Mobile - Internet of Things	Basic Video on the Internet's Operation Basic Concepts of Client/Server Basics of Wireless Networking (Funny – but political ad on too much connectivity & privacy invasion). Here Video Discussion of how businesses use Social Media Clips on IoT: basic, future Read: Digital Ubiquity, Iansiti and Lakhani, November, *Harvard Business Review,* 2014
Week 8 (3/6)	**BUFFER**	
Week 9 (3/13)	**Case Study Discussion** **Mid -Term Exam (around here)**	
(3/20)	**SPRING BREAK**	
Week 10 (3/27)	**Evolution and Impact of Enterprise Systems on Business, Digitizing the Business** **Enterprise Systems and Digitalization** Virtual Value Chain	Read: Exploiting the Virtual Value Chain, Rayport & Sviokla, *Harvard Business Review*, Nov.-Dec., 1995.
Week 11 (4/3)	**Enterprise Systems and Digital Effects** **Commoditization Effect** - Move to Markets **Smart Management** - Strategic Frameworks - Customer-Orientation - Sustainability	Read: Computers, Networks & the Corporation, Malone & Rockart, *Scientific American*, Sept., 1991 See Porter's Five Force Model and Value Chain Model. The Five Competitive Forces that Shape Strategy, Porter, January 2008, *Harvard Business Review*. Michael Porter's latest thinking on the 5-Force Model (Video)

		Read: <u>Customer Service Life Cycle</u>
		<u>How easyJet uses digital to drive competitive advantage</u>
		Read: The Transforming Power of Complementary Assets, Hughes & Scott Morton, *Sloan Management Review*, Summer, 2006.
		Read: IT Doesn't Matter, Carr, *Harvard Business Review*, May, 2003, pp.41-49.
		Read: The End of Corporate Computing, Carr, *Sloan Management Review*, Spring 2005, pp. 67-74.
Week 12 (4/10)	**Enterprise Systems and Digital Effects** **Economic Effect** • Digital Economics **Smart Management** • Digital Strategies (Syndication, Versioning, Customization, Bundling)	Read: Knowing the Rules, A conversation with Hal Varian See: <u>Dot Com Failures</u> Read: Syndication: The Emerging Model for Business in the Internet Era, Werbach, *Sloan Management Review,* May-June 2000
Week 13 (4/17)	**Enterprise Systems and Digital Effects** **Network Effect** • Network Value • Multi-sided Markets **Smart Management** • Platform/Ecosystem Competition • Leverage Long Tail • Infomediaries • Market Disruption/Sharing Economy	Read: Strategic Decisions for Multisided Platforms, Hagiu, Sloan Management Review, Winter 2014 Read: How To Avoid Platform Traps, Cennamo & Santalo, *Sloan Management Review*, Fall 2015 Read: Thriving in an Increasingly Digital Ecosystem, Weill and Woerner, *Sloan Management Review*, Summer 2015 Read: Mastering the Intermediaries, Edelman, *Harvard Business Review*, January 2014. Read: Should You Invest in the Long Tail, Elberse, *Harvard Business Review*, July-Aug, 2008 Adapting to the Sharing Economy, Matzler,Veider & Kathan, *Sloan Management Review*, Winter 2015
Week 13	**CASE STUDY**	

4/24	**BUFFER**	
Week 14 5/1	**IMPLICATIONS** **AND WRAP-UP**	• Leading your company's Digital Transformation (video) • What Digital Transformation Means for Business (video) • Transforming the music industry (video)
Final Exam as per MBA Schedule		

NOTE: Any assignment/cases will be announced and made accessible at least 1 week before the discussion date.