ISTM 654 Information and Process Systems

Summer 2016, West Los Angeles Graduate Campus

Wednesdays 6 PM – 10 PM

Professor: Erik Krogh
erik.krogh@Pepperdine.edu
Office Hours: By appointment

- “The illiterate of the 21st Century will not be those who cannot read or write, but those who cannot learn, unlearn and relearn.” Alvin and Heidi Toffler, Futurists
- “From the dawn of civilization until 2003, humankind generated five exabytes of data. Now we produce five exabytes every two days… and the pace is accelerating. People aren’t ready for the technology revolution that’s going to happen to them” Eric Schmidt, Executive Chairman, Google
- “The nature of competition – increasingly intense, global and unpredictable – requires strength across the board. So the objective is to decompose the enterprise into its component parts, understand with great precision what is truly differentiating – where the enterprise has strengths and weaknesses – and then make decisions about how to build, buy or partner for world-class capability.” IBM Global Innovation Outlook 2.0 (2005)
- “We’re selling to the business unit more than to the CIO now when we do our job right.” John Chambers, Executive Chairman, Cisco

Globalized business is embracing Information Technology (IT) in a revolutionary manner. IT is no longer limited to such back-office Management Information Systems (MIS) functions as decision support, finance, and production control, but is integral to many products and services. Social media is an essential channel to customer intimacy: bad reviews can sink a product or service, while good reviews can go viral and boost sales exponentially. IT-enabled innovation is disrupting many traditional businesses: witness the demise of such established industries as newspapers and music, the lodging industry feeling the impact of peer-to-peer housing rental through websites such as Airbnb, and how mobile apps like Apple Pay are changing the face of credit card payments. Modern automobiles can be conceptualized as rolling computers and mobile banking apps have changed the retail banking experience forever. Learning algorithms and smart machines are threatening to reduce "knowledge worker" jobs that heretofore were considered “safe”. Clearly this is not your father’s MIS…

In today’s hypercompetitive business environment, it is incumbent on the business manager to understand how people, processes, and IT affect business decisions. The debacle of failed IT projects is legion, and adoption of newly implemented IT systems is challenging. This course will help you understand the environment, options, analysis strategies, and methodologies surrounding the effective implementation and use of IT in business.

COURSE OVERVIEW

This course will provide an understanding of how information systems can provide a strategic advantage in the Digital Economy.

The first half of the course will explore how the information resource can provide competitive opportunities for firms who can effectively gather, analyze, and exploit data. Emphasis will be placed on the emerging “Big Data” paradigm. We will also look at IT-enabled innovation.

The second half of the class will focus on the primary business application of this technology, what problems it can address, and the organizational importance of these systems for remaining
competitive in a world characterized by disruption and discontinuous change. Students will become familiar with the wide range of business processes that must be managed effectively for success.

Here are the salient take-aways from the course, and why this learning is important:

- As a knowledge worker you will use information systems in your work every day. You need to **understand IT fundamentals and how IT can be exploited to deliver business results**.
- In the digital firm, you will be involved increasingly in IT investment decisions. You will therefore need to **recognize the large-scale systems that run modern organizations, understand what drives the success of a company’s IT investments, and learn how these investments facilitate effective business strategy and emerging business models**.
- Information systems are essential to **optimizing business processes** that can provide competitive advantage to the firm. Automation, streamlining, and integration of processes in the digital firm can separate industry leaders from those less successful.
- You must know **how to evaluate and analyze information-based products and services** in the increasing number of industries that are being transformed by information technology. Assignments, projects, and case studies throughout the course will reinforce your learning of how to use information technology to pursue business strategy.

In addition, the course will focus on the Graziadio School’s Core Program Objectives:

- To enhance communication skills to increase students’ effectiveness in their professional lives
- To enhance skills both as participants in and leaders of teams.
- To develop skills in creative problem solving and informed decision making.
- To develop analytical skills for assembling, organizing, and utilizing information to meet situational demands.
- To increase understanding of the global environment as it affects the workplace.
- To incorporate values and ethical conduct into decision making.

**COURSE FORMAT**

Classes will include a mixture of case discussions, lectures, debates, roundtable discussions, group presentations, and guest speakers. Students are expected to come to class prepared to discuss the readings.

A typical class will include “IT in the news”, lecture, open discussions, and group case presentations.

**Textbooks and Papers**

2. Harvard Business School cases and readings. Please use this link to purchase HBS materials: https://cb.hbsp.harvard.edu/cbmp/access/48617948
3. Supplemental articles and cases will be posted in Sakai.
**Case Workups and Reading Assignments**

Most class sessions will include a case work-up to be completed prior to class.

Cases are an opportunity for you to test your ability to make business decisions in a risk-free environment. Case workups are meant to stimulate your thinking so that you are prepared for class discussion. These assignments help you practice analysis skills and get you thinking both strategically and tactically.

Case study work will take a “virtual reality” approach. Often times there will be no single “one right answer” for the questions posed in the assignment. However, there are thoughtful and well-developed answers, and these will be viewed favorably. While this may seem like a difficult thing for a student to implement, it is similar to a real work environment, where a superior may ask for analysis of a business situation and expect you to deliver what she or he expects. While completing your analyses, you should be mindful of providing just the right amount of information: too little will not describe your answer well enough, while too much may obscure key points. Succinctness is always valued: the fewer words you use to clearly make your point will be appreciated.

While teams often divide the work on case work-ups (e.g. individuals taking responsibility for a single question), please ensure that you understand the key learnings for each case. **Much of the Midterm and Final Exams will be based on case key concepts.**

**The Business Model Canvas**

To identify the drivers behind IT initiatives, you will be utilizing the Business Model Canvas (BMC) framework that was co-created by 470 practitioners from 45 countries. The strategic application of IT must necessarily begin with a deep understanding of what drives the business. Why do consumers purchase product A over product B? Is it a better product or is it a better value? How do firms deliver their product efficiently? Is IT tightly or loosely integrated into the product offering? The BMC framework is very helpful in determining 9 parameters affecting information systems investment decisions. The Business Model Canvas framework assesses these 9 building blocks:

- CS = Customer Segments
- VP = Value Proposition
- CH = Channels
- CR = Customer Relationships
- R$ = Revenue Streams
- KR = Key Resources
- KA = Key Activities
- KP = Key Partners
- C$ = Cost Structure

Your case analyses will all include a “BMC work-up” and will be the foundation for your IS prescriptions.

**Midterm and Final Exams**

The midterm exam will be a take-home exam that you will have approximately one week to complete outside of class. The final exam in given in-class during Session 13 and is closed book. Students may bring a single study sheet “IS Tool Box” (aka “cheat sheet”) to the Final. This single sheet may contain information on both front and back sides.
**Information Systems Skills Development Exercises**

There are three IS skills exercises to provide you with a “hands-on” experience with some of the most important IS applications. Details of these assignments will be posted in Sakai under assignments.

**Information Systems skills development assignment 1: Financial and economic data extraction and manipulation exercise.** You will be required to learn and use various electronic databases to search, extract and manipulate financial and economic data and export to MS Excel.

**Information Systems skills development assignment 2: Salesforce.com immersion**

You will be required to learn and use the Salesforce.com reports CRM system.

**E2B Project**

Tying the trimester’s learnings together is an Education-to-Business (E2B) group project in which you will have the opportunity to act as consultants for an LA-based company who has come to Pepperdine for assistance with real-world business challenges. This practical, results-oriented education goes beyond theory and will elevate your understanding and sense of accomplishment. U.S. News & World Report cites Pepperdine’s E2B program as one of the Top 10 College Courses That Will Pay Off at Work.

Specific information regarding the client company and project will be disclosed during our first class meeting.

**Guest Speakers**

Guest speakers may be invited during the trimester. These speakers are typically high-level IT executives, including CIOs. Please show them professional courtesy by giving them your undivided attention during their talks and come prepared with thoughtful questions to ask.

**Contacting the Instructor**

The best way to reach the instructor is via e-mail (erik.krogh@pepperdine.edu). I read my mail several times a day (once or so a day on weekends).
Grading Components

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<thead>
<tr>
<th>Component</th>
<th>Percent of Grade</th>
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<tbody>
<tr>
<td>Group case workups</td>
<td>15%</td>
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<tr>
<td>Midterm exam</td>
<td>20%</td>
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<tr>
<td>Final exam</td>
<td>20%</td>
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<td>E2B project</td>
<td>20%</td>
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<tr>
<td>Class participation</td>
<td>15%</td>
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<tr>
<td>IS skills exercises (2 total, 5% each)</td>
<td>10%</td>
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Grading Scale

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<tr>
<th>Grade</th>
<th>% Range</th>
<th>Description</th>
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<tr>
<td>A</td>
<td>96-100</td>
<td>Outstanding</td>
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<tr>
<td>A-</td>
<td>93-95</td>
<td>Excellent</td>
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<tr>
<td>B+</td>
<td>87-92</td>
<td>Very good</td>
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<tr>
<td>B</td>
<td>83-86</td>
<td>Good</td>
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<tr>
<td>B-</td>
<td>79-82</td>
<td>Satisfactory</td>
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<tr>
<td>C+</td>
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<td>C</td>
<td>71-74</td>
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<tr>
<td>C-</td>
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<td>D</td>
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<td>F</td>
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Your final grade will be based solely on your class grade point average. Each cutoff point is a “hard” value, e.g. if your final class GPA is “92.9” and the low value for an A- is “93”, you will receive a “B+” final grade.

A Note On Group Paper Ownership

All team members submitting group paper assignments will receive the same grade.

All too often, student groups divide work assignments among the members of the group but fail to review the entire paper after all of the individual contributions are assembled. A final review should be performed to ensure that the paper flows well, that there are no misspellings or grammatical issues, and that there is no plagiarism (e.g. extracting text from the internet and pasting into the document). If you do not spend the time performing a final review you may not receive the grade you desire.

Summary of Directed Instruction Elements

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<thead>
<tr>
<th>Directed Instruction Activity</th>
<th>Hours</th>
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<tbody>
<tr>
<td>In-Class Instruction</td>
<td>36</td>
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<tr>
<td>Synchronous Instruction</td>
<td>0</td>
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<tr>
<td>Asynchronous Instruction</td>
<td>24</td>
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<tr>
<td>TOTAL</td>
<td>60</td>
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POLICIES

Sakai and assignment submission
- The Sakai collaborative course tool will be used extensively. **ALL OF YOUR ASSIGNMENTS WILL BE POSTED IN SAKAI.** We will also use Sakai for course announcements and related issues.
- Non-Harvard cases will be posted in Sakai Resources – Cases. Harvard cases need to be purchased from Harvard Business School Press.
- Readings will be posted in Resources – Readings.
- Grades will be available in Sakai throughout the term.

Class Attendance and Participation
You are expected to attend all class sessions. If you cannot attend for a specific reason then please inform the professor through e-mail that you are unable to attend. To receive participation points for each class, your questions and comments should demonstrate ALL of the following: understanding of the reading material, integration of personal experience (obtained from out-of-class reading, observations, or experiences related to the material) with classroom experience, pose new questions/issues/ideas to consider, non-repetitive, contributes to others’ learning.

E2B Group project participation
All members of the group are expected to participate in the group project. Group projects often encounter the “free rider” problem. Teams are encouraged to resolve participation issues internally. If the group cannot resolve such issues, please contact the instructor. A “blind” evaluation form will be completed by every member of the team on presentation day, and an identified failure to participate fully can impact the individual’s grade.

Respecting Intellectual Property

This class will enforce a zero-tolerance policy on plagiarism. This includes, but is not limited to, cutting-and-pasting from online sources and copying other students’ work.

When you became a student at Pepperdine, you acknowledged a code of ethics. Learning is the most important outcome of a university education, and plagiarism is the enemy of learning. This class has a zero-tolerance policy for academic dishonesty. Some have plagiarized other students’ assignments, others have cut-and-pasted from the Internet. While it is possible to plagiarize without being discovered, the consequences are severe if you are discovered. You risk your entire academic career if you decide to plagiarize, so be advised that it simply is not worth the risk. Please read a subset of the Graziadio School’s policy below:

1.2.1. Misrepresentation of Academic Work:
   a. Plagiarism, or the employment of another’s statements or thoughts without giving that source appropriate credit;
   b. Unauthorized multiple submission of the same paper(s);
   c. Submitting for credit a purchased assignment or paper;
   d. Submission of an assignment prepared by another person (or persons) that is misrepresented as the student’s independent work.
   e. Willfully not fully participating in a team project.
The complete Graziadio Code of Academic Ethics and Conduct for Students can be found in the current Academic Catalog.

For individual assignments you are responsible for creating and protecting (i.e. not allowing others to copy) your own work. You should respect the intellectual property of others by not plagiarizing work done by others.

Please cite direct quotes and ideas you are paraphrasing.

This group project whitepaper will be submitted through the originality verification website Turnitin http://www.turnitin.com

**Laptops & Mobile Devices**

It is expected that students will devote their complete attention to the class and not be distracted by the many temptations available on their IT devices. Please do not use your laptops for anything other than class-related purposes. *Not paying attention in class will be at your own peril: if you miss out on what is discussed you run the risk of not performing well on assignments and exams.*

**Assistance for Students with Disabilities**

The Disability Services Office (DSO) offers a variety of services and accommodations to students with disabilities based on appropriate documentation, nature of disability, and academic need. In order to initiate services, students should meet with the Director of the DSO at the beginning of the semester to discuss reasonable accommodation. If a student does not request accommodation or provide documentation, the faculty member is under no obligation to provide accommodations. You may contact the Director of Disability Services at (310) 506-6500. For further information, visit the DSO Web site at: http://www.pepperdine.edu/disabilityservices/.

**Pepperdine University Policies**

Additional policies are clearly stated in the academic catalogue and can be viewed online at: http://bschool.pepperdine.edu/programs/content/catalog/gscatalog14.pdf

**About the Instructor**

Erik Krogh’s extensive Information Systems experience spans 22 years. He began his career as a data analyst, rose to the rank of Divisional CIO, and is currently completing his PhD in Information Systems. His IS experience spans multiple industries, including financial services, supply chain/manufacturing, and government contracting.

Erik has spent his IS career working in a variety of technical and managerial roles for companies ranging in size from small start-ups to large IT integrators, such as Computer Sciences Corporation. He previously held management positions at Indymac Bank, Hewlett-Packard, and ARAMARK Uniform Services.

Krogh has taught undergraduate and graduate classes at the USC Marshall School of Business and Pepperdine University’s Graziadio School of Business. He holds an MBA from the University of Southern California’s Marshall School of Business and graduated Magna Cum Laude with a Bachelor of Science in Management from Pepperdine University.

He is a member of the Southern California Chapter of the Society for Information Management (SIM) and participates in CIO roundtables where top Southern California IT executives discuss their real-world issues. He co-authored a paper that won the 2005 SIM “Best Paper Award” and has been published in MIS Quarterly Executive.
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<tr>
<th>Date</th>
<th>Topic</th>
<th>Case</th>
<th>Readings</th>
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<tbody>
<tr>
<td>1 5/4</td>
<td><strong>Course Introduction</strong></td>
<td></td>
<td>• From analog to digital: How to transform the business model</td>
<td>• Announce project team configurations in class</td>
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<td>• Student introductions and housekeeping</td>
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<td>• IT fundamentals</td>
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<td>• Business/IT overview</td>
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<td>• Business Model Canvas and how to analyze cases</td>
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<td>• Meeting with E2B client</td>
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<td><strong>Business Strategy, Process, Innovation and Information Technology</strong></td>
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<td>• From analog to digital: How to transform the business model</td>
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<td>2 5/11</td>
<td><strong>Business, Analytics, Information Resources</strong></td>
<td>Managing with Analytics at Proctor and Gamble (Harvard Case)</td>
<td>• Big Data: The Management Revolution</td>
<td>• Group case study workup</td>
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<td><strong>NO FACE-TO-FACE CLASS SESSION</strong></td>
<td></td>
<td>• You May Not Need Big Data After All</td>
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<td>3 5/18</td>
<td><strong>Managing Data and Information Resources for Business Analytics</strong></td>
<td>The Evolution of Information Governance at Intel (Harvard Book Chapter)</td>
<td>• Evidence-Based Management</td>
<td>• Group case study workup</td>
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<td>• Data: The Prerequisite for Everything Analytical</td>
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<td>4 5/25</td>
<td><strong>Managing Knowledge Resources and Collaboration for Business Innovation</strong></td>
<td>Leveraging Collaborative Technologies to Build a Knowledge Sharing Culture at HP Analytics</td>
<td>• Collaborating With Customer Communities: Lessons From the Lego Group</td>
<td>• Group case study workup</td>
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<td>• Designing Effective Knowledge Networks</td>
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| 5    | 6/1 Becoming IT Savvy: Enterprise IT Architecture, Infrastructure, and its components | 1. Delivering an Effective Enterprise Architecture at Chubb Insurance 2. The Jewel in the Crown - Enterprise Architecture at Chubb | • The Internet of Things  
• Embrace the Inevitable: Six Imperatives for Preparing your Company for Cloud Computing  
• Standardization and Innovation: Managing and Investing in IT Infrastructure (Harvard Chapter) | Group case study workup                  |
| 5a   | 6/5 Information systems skills exercise 1 due by 11:55 PM (Financial and data extraction and manipulation exercise) | Ethical Issues in the Big Data Industry | • Leadership in the Age of Transparency  
• Telematics at UPS: En Route to Energy Information | E2B Client Midpoint presentation          |
| 6    | 6/8 Using Information Resources and Analytics for Social, Environmental and Ethical Responsibility  
E2B Client Midpoint Meeting | Ethical Issues in the Big Data Industry | • Leadership in the Age of Transparency  
• Telematics at UPS: En Route to Energy Information | E2B Client Midpoint presentation          |
• Effective Information Security Requires A Balance Of Social And Technology Factors | Group case study workup                  |
| 7a   | 6/19 Midterm due by 11:55 PM                                          |                                                                      |                                                                          |                                        |
| 8    | 6/22 IT-enabled Product and Service Innovation                          | Innovation at Progressive (A): Pay-As-You-Go Insurance (Harvard Case) | • A Taxonomy of Innovation  
• Accelerated Innovation: The New Challenge from China  
• Innovation Magic (Harvard Note) | Group case study workup                  |
<table>
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</table>
• When Should a Process be Art, not Science | Group case study workup |
| 10 7/6  | IT-enabled Innovations in Customer Facing Processes        | National Instruments *(Harvard Case)*              | • Know What Your Customers Want Before They Do  
• Revisiting Complexity in the Digital Age  
• Surviving Disruption | Group case study workup |
| 11 7/13 | IT-enabled Innovations in Supply Chain Management          | RFID at METRO Group *(Harvard Case)*              | • Supply Chain Information Systems *(Harvard Book Chapter)*  
• The Triple-A Supply Chain  
• Creating More Resilient Supply Chains | Group case study workup |
| 11a 7/17 | Information systems skills exercise 2 due by 11:55 PM      | (salesforce.com immersion)                         |                                                                       | |
| 12 7/20 | Justification and Evaluation of IT-based Innovation projects | Volkswagen of America: Managing IT Priorities *(Harvard Case)* | • Building Better Business Cases for IT Investments  
• Investing in the IT That Makes a Competitive Difference  
• Finishing Off IT | Study for Final Exam and prepare E2B Final presentation |
| 13 7/27 | Course wrap-up and reflections                            | In-class Final Exam                                | • In-class final exam | |
| 14 8/3  | E2B Group Presentations                                   |                                                   | • E2B Client Final presentations  
• Peer review feedback due | |