 Syllabus

**MIS760 – IT Strategy**

**Strategic Issues in IT Management**

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**Catalog Description**

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| This course addresses the strategic responsibilities and roles of the CIO, IT managers and personnel. It focuses on deriving a firm’s strategy for gaining and sustaining competitive advantage through information systems; and on the current real world challenges of IT management. A principle goal is to understand how IT delivers organization value. Effective information systems use to define systems that support the operational, administrative and strategic needs throughout the organization will also be addressed. Approaches to managing the information systems function in organizations and ensuring alignment with business strategies will be one of the focuses of the course. A substantial amount of time is devoted to understanding and addressing the real world current issues facing the IT organization.  The golden thread of the course is aligning IT strategies with business strategies. However this is a necessary but not sufficient condition for success. The IT organization must push beyond alignment to form a true partnership with the business. These topics are overlaid with current IT issues. This analysis will lead to the business and technology organization working together to drive the company to a competitive advantage. |

**Introduction to Course**

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| This course will address strategy first from a business perspective and then discuss in detail tools that can be used to align an IT strategy with the business strategy. Once the foundations of strategy are understood, unlike many courses in IT strategy much of the course will address the real world current challenges of IT management. It will explore some of the most important issues facing IT managers today as defined by organizations in different industries around the world. A principle goal is to understand how IT delivers organization value. The changing role of the CIO and the IT organization will be addressed.  The course is divided into 8 Modules:   1. Business Strategy – covers the concepts and principles of a business strategy. It will address the importance of a mission, vision, objective setting and establish a strategic framework. 2. The Role of the CIO – the current and emerging roles of the CIO and the IT organization will be covered. 3. IT alignment Strategies and tools – addresses tools to be used in assessments both within the firm and the competitive environment. 4. Delivering value with IT – examines the complex ways that IT and business value are related. 5. IT drives business improvement and competitive advantage – discusses where and how IT can drive advantage for the business 6. IT Governance – explores key concepts in how the IT organization is structured and managed to effectively deliver IT products and services to the organization. 7. IT enabled innovation – discusses some of the ways technology is being used to transform organizations. 8. IT Portfolio Development and Managment– looks at how the IT function must transform itself to be able to deliver business value effectively. |

**Learning Goals**

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| After taking this course, the student will be able to:   * Develop an IT strategy that aligns with the business * Understand the current issues facing the IT organization and have tools to address them * Apply how IT can deliver value * Explain the changing role of the CIO * Articulate how to forge a partnership with the business * Articulate the way in which technology enables business strategy * Understand how IT can drive business improvement and competitive advantage |

**Pedagogy**

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| The course will employ lectures, case studies, class discussions, individual assignments, and team projects. Students will critically evaluate and discuss concepts in an interactive environment. The use of Stevens online technologies will supplement class discussion and external communications. |

**Required Text(s)**

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| IT Strategy, Issues and Practices, 3rd edition, James D. McKeen, Heather A. Smith; Prentice Hall, 2015. ISBN -10: 0-13-354424-9 (ISBN 13: 978-0-13-354424-4). |

**Required Readings**

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| Current topics will be selected and discussed throughout the semester.  *Connect More, Intersecting insights from the IBM CEO, CMO, and CIO studies*, IBM Institute for Business Value, March 2013  *The Four Futures of the CIO Role*, Gartner, March 27, 2013  *The CIO’s role in business Innovation: Sustain or Disrupt?,* Deloitte, 2012  *CIO as venture capitalist*, Deloitte Consulting LLP, February 2014  *The Strategic CIO*, The Economist, sponsored by EMC, 2013  *The Essential CIO, Insights from the Global Chief Information Officer Study*, IBM, CIO C-Suite Studies, 2011  *The Five Competitive Forces That Shape Strategy*, Michael Porter, Harvard Business Review, January 2008.  The do-or-die questions boards should ask about technology, McKinsey & Company, June 2013  *IT under pressure: McKinsey Global survey results*, March 2014  Cristian Julio and Michael Parfett, *Strategy and Business Models – Understanding and aligning the concepts, March 2011*  Ivanka Visnjic, Andy Neely*, From Processes to Promise, How complex service providers use business model innovation to deliver sustainable growth, University of Cambridge,* December 2011  *High Performers in IT: Defined by Digital, Accenture,* Insights from fourth High Performance IT research, October 2013  *The Software Edge, How effective software development and delivery drives competitive advantage,* IBM Institute for Business value, March 2013  *Designing Dynamic Operations, How Companies can turn permanent Volatility into a permanent competitive advantage,* Accenture High performance delivered, 2012  *The “upwardly” mobile” enterprise, Setting the strategic agenda,* IBM Institute for Business Value, 2013  *Under cloud cover: How leaders are accelerating competitive advantage,* IBM Center for Applied insights, October 2013  *Analytics: A Blueprint for value, Converting big data and analytics insights into results,* IBM Institute for Business Value, October 2013  *Accenture Technology Vision 2014, From Digitally Distrupted to Digital Disrupter,* Accenture, 2014  Edward A. Barrows Jr., *Four Fatal Flaws of Strategic Planning*, Harvard Management Update, April 2009, Volume 14, number 4.  Robert Kaplan and David Norton, *Using the Balanced Scorecard as a Strategic Management System*, Harvard Business Review, 2000.  *CIOs must renew strategies to build a skilled workforce*, Gartner, May 23, 2013  *Gartner: Top 10 strategic technology treads for 2014*, Gartner Symposium/ITExpo October 2013 in Orlando  *Making data analytics work: Three key challenges*, McKinsey & Company, March 2013  *Big Data: What’s your plan*, McKinsey Quarterly, Marketing and Sales practice, March 2013  *In search of insight and foresight; Getting more out of big data*, The Economist, Intelligence Unit; sponsored by Oracle and Intel, 2013 |

**Business Cases**

The following business case will be individually analyzed and a detailed document written and submitted for grade:

Ali FarHooMand, Citibank’s E-Business Strategy for Global Corporate Banking, Asia Case Research Centre, The University of Hong Kong, 2008.

The following business cases represent the cases from the McKeen and Smith text that will be read and discussed in class after the relevant materials are covered:

Delivering Business Value with IT at Hefty Hardware

Investing in TUFS

IT planning at ModMeters

Building Shared Services at RR Communications

Enterprise Architecture at Nationstate Insurance

IT Investment at North American Financial

Innovation at International Foods, pages 230, 233

CRM at Minitrex

Customer Service at Datatronics

Project Management at MM

Managing Technology at Genex Fuels, pages 306, 307

Working Smarter at Continental Furniture

**Assignments**

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|  | **Assignment** | **Description** | **Percentage of Grade** |
| 1 | Analysis of Case Studies | Individual assignments: One case study will be graded. Analysis will include critical review of the management decisions presented in the respective case, followed by the student’s recommendations to management. Each question should be addressed separately. Case study write-ups should be 3-5 pages in length. | 10% |
| 2 | Current issue analysis | This is team assignment. One of the current issues will be chosen from a document that will be provided. The team is to do a thorough analysis, using as many of the tools and techniques discussed in class. You will prepare a presentation and give in class. | 30% |
| 3 | Current article discussions | This is a team assignment. Your team will find 2 current articles **(must be within the last 6 months)** that are relevant to this course. You will be assigned a week in which you will discuss the articles you have found. Your team will lead a discussion in class on the article. Send them to the professor 2 days before you will present. | 10% |
| 4 | Alignment, Business Improvement, Partnership | This is an individual assignment. You will write a 2/3 page paper on how you would align an IT strategy and a business strategy; demonstrate how you would forge a partnership with the business and how IT drives business improvement and leads to a competitive advantage. | 10% |
| 5 | Final Strategy paper | This is a team assignment. Students will develop an IT Strategy for the firm they work for or a selected firm of their choosing in a paper of 25 - 50 pages. A presentation will be given in class. | 30% |
| 6 | Participation | Class participation and sharing of real life experiences are part of the learning process in this class. Attendance is a part of class participation and students are expected to attend all classes. | 10% |
|  | Total: |  | 100% |

Submission of Assignments

All assignments must be submitted in electronic form inside the Canvas system: www.stevens.edu/canvas. Assignments will only be accepted if they are submitted by the due date.

Grading Scale

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| **Grade** | **Score** | **Grade** | **Score** |
| A | 93-100 | C | 73-76 |
| A- | 90-92 | C- | 70-72 |
| B+ | 87-89 | F | <70 |
| B | 83-86 |  |  |
| B- | 80-82 |  |  |
| C+ | 77-79 |  |  |

# **Ethical Conduct**

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| The following statement is printed in the Stevens Graduate Catalog and applies to all students  taking Stevens courses, on and off campus.  “Cheating during in-class tests or take-home examinations or homework is, of course, illegal and immoral. A Graduate Academic Evaluation Board exists to investigate academic improprieties, conduct hearings, and determine any necessary actions. The term ‘academic impropriety’ is meant to include, but is not limited to, cheating on homework, during in-class or take home examinations and plagiarism. “  Consequences of academic impropriety are severe, ranging from receiving an “F” in a course, to a warning from the Dean of the Graduate School, which becomes a part of the permanent student record, to expulsion.  *Reference: The Graduate Student Handbook, Academic Year 2003-2004 Stevens*  *Institute of Technology, page 10.*  Consistent with the above statements, all homework exercises, tests and exams that are designated as individual assignments MUST contain the following signed statement before they can be accepted for grading. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  I pledge on my honor that I have not given or received any unauthorized assistance on this assignment/examination. I further pledge that I have not copied any material from a book, article, the Internet or any other source except where I have expressly cited the source.  Signature \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_  Please note that assignments in this class may be submitted to [www.turnitin.com](http://www.turnitin.com), a web-based anti-plagiarism system, for an evaluation of their originality. |

**Course Schedule**

| Week | Topic  M = module number | Text and Article Readings | Business CasesAssignments |
| --- | --- | --- | --- |
|  | Module 1 – Business Strategy |  |  |
| 1 | M1 – Introduction and overview of course  Business Strategy | Syllabus  Articles:  1.Four Flaws of strategic planning;  2.Using the Balanced scorecard |  |
|  | Module 2 – Role of the CIO |  |  |
| 2 | M2 – Role of the CIO  Guide to CIO achievement | Articles:  1.The Strategic CIO  2. Connect More, Intersecting insights from the IBM CEO, CMO, and CIO studies  3.Four Futures of the CIO Role;  4. The CIO role in Business Innovation; sustain or disrupt;  5. CIO as venture capitalist | *Class case discussion:*  *Investing in TUFS* |
|  | Module 3 – IT alignment Strategies and Tools |  |  |
| 3 | M3 – IT alignment strategies  Ansoff and Porter | Articles:  1.The five competitive forces that shape strategy  2. The do-or-die questions boards should ask about technology  3. IT under pressure | ***CITI Case due***  *Class case discussion:*  *CRM at Minitrex* |
| 4 | M3 – Business Models  Manheim case | Articles:  1.Strategy and Business Models – Understanding and aligning the concepts;  2. From Processes to Promise;  3. Manheim case | *Class case discussion:*  *Project Management at MM* |
|  | Module 4 – Delivering Value with IT |  |  |
| 5 | M4 – Developing and delivering on the IT value proposition  Developing IT strategy for business value  Linking IT to Business Metrics | McKeen & Smith Chapters 1, 2, 3  Article: High Performers in IT Defined by Digital | *Class case discussion:*  *Delivering Business Value with IT at Hefty Hardware* |
| 6 | Discussion of the IT current issues |  | **Team Presentations on IT issue** |
| 7 | M4 – Building a strong relationship with the business  Communicating with Business Managers  Building Better IT Leaders from the bottom up | McKeen & Smith Chapters 4, 5, 6 | *Class case discussion;*  *IT planning at ModMeters* |
|  | Module 5 – IT drives Business improvement leading to Competitive Advantage |  |  |
| 8 | M5 – Mastering building blocks Managing the journey  Implementation  Business Improvement and Competitive Advantage | Articles:  1.The Software edge  2. Designing Dynamic Operation  3. The “upwardly mobile” enterprise  4. Under the cloud  5. Analytics: A Blueprint for value | *Class case discussion:*  *IT Investment at North American Financial* |
|  | Module 6 – IT Governance |  |  |
| 9 | M6 – IT Shared Services  Delivering IT Functions  IT Budgeting process | McKeen & Smith Chapters 7, 8, 9  Article: Accenture Technology Vision 2014 | **Individual assignment on alignment, partnership and competitive advantage due**  *Class case discussion: Building Shared Services at RR Communications* |
| 10 | M6 – Managing IT based risk  Information Management: The Nexus of Business and IT | McKeen & Smith Chapters 10, 11  Article: *CIOs must renew strategies to build a skilled workforce* | *Class case discussion:*  *Enterprise Architecture at Nationstate Insurance* |
|  | Module 7 – IT enabled Innovation |  |  |
| 11 | M7 – Innovation with IT  Big Data and Social Media  Improving the Customer Experience | McKeen & Smith Chapters 12, 13, 14  Articles:  1.Making data analytics work; Three key challenges;  2. Big Data: what’s your plan  3. In search of insight and foresight; getting more out of big data | *Class case discussion:*  *Innovation at International Foods* |
| 12 | M7 – Business Intelligence  Enabling Collaboration with IT | McKeen & Smith Chapters 15, 16  Article:  Gartner: Top 10 strategic technology treads for 2014 | *Class case discussion: Customer Service at Datatronics* |
|  | Module 8 – IT Portfolio Development and Management |  |  |
| 13 | M7 – Application Portfolio Management  Managing IT Demand  Creating and evolving a technology roadmap  Enhancing Development productivity  Information Delivery: IT’s evolving role | McKeen & Smith Chapters 17, 18, 19  Chapters 20, 21 | *Class case discussion:*  *Managing Technology at Genex Fuels*  *Or*  *Working Smarter at Continental Furniture* |
| 14 | Discussion of Final papers  Class conclusions |  | **Final paper due and Team Presentations on IT Strategy** |

## Team Projects

A major component of this course is the submission of team projects. The primary goals of the project are:

* Explore a current IT issue
* Develop a IT strategy for your firm/organization; or a company of your choosing

The projects require you to prepare one paper and two presentations. The strategy document will be 25 to 50 pages (font no smaller than 11 point, 1-inch margins all around; acceptable fonts are Times New Roman, and Arial). The presentations will be Power point materials targeted at a 30 to 45 minute presentation.

You will be assigned to a team. Once given your team, you need to pick one topic from the 2011 CIO study done by IBM on which you will prepare the presentation. The topics are list below. You can chose to apply your topic to a company, industry or the field in general. You need to submit your first and second choice to the instructor for his approval. Once approved use the information discuss in class and conduct research on your area to prepare a thorough analysis of the topic. The presentation needs to address the current state; the envisioned target state; alternatives to the target state; the recommended alternative; use as many of the tools discussed in class to evaluate each phase. **The analysis using the tools can be applied to the company/industry/field in general; however be sure to also use some of them to apply directly to your topic area. It is important you do research on your chosen area i.e., define in detail; define benefits; define how it is used in the world today. The class should come away with a thorough understanding of the topic you have chosen.**

Second as the semester progresses you need to pick the IT area you will develop your strategy on. It could be a strategy for a whole IT group; or one group within the IT organization; or an enhanced strategy for an existing IT service; or a new IT service you are proposing. It can be the company you work for or a company of your choosing. You could if your topic for your first presentation is suitable develop a strategy for a company to develop a service to be use in the company you chose. E.g., cloud computing, mobile solutions, BI and analytics etc. **This is not a report on an existing strategy; you are to develop a NEW Strategy. You need to use the strategy** **template that is posted as a guide. You need to prepare both a paper and a presentation.**

The topics areas for the first paper are:

CIO focus over the next 3 to 5 years:

1. Insight and Intelligence
2. Client intimacy
3. People skills
4. Internal collaboration and communications
5. Risk management
6. Enterprise model changes
7. Industry model changes
8. Revenue model changes

CIO toolsets:

1. Business Intelligence and analytics
2. Mobility solutions
3. Virtualization
4. Cloud computing
5. Business process management
6. Risk management and compliance
7. Self- service portals
8. Collaboration and social networking

Mandates:

1. Expand – refine business processes and enhance collaboration
2. Leverage – streamline operations and increase organization effectiveness
3. Transform – change the industry value chain through improved relationships
4. Pioneer – radically innovate products, markets, business models

Assignment guidance:

You should use and sight references. Good sources: academic journals, government or industry organization data, textbooks, company information etc. Use footnotes or endnotes and show your sources.

A fair quality paper tells a story and reports on events.

A good quality paper uses greater depth of information from different sources, shows greater detail and connection of theory to the situation being studied.

An outstanding quality paper uses detail, theory and contracts in information to show thoughtful probing and analytic understanding of the topic.

**Business Cases:**

We will have group discussions in class on many of the cases included in your text. They are listed

in the course schedule above.

Additionally, there will be a detailed business case assigned as individual assignments that will be graded. These write-ups will involve a 3-5 page document (typed, double-spaced, font no smaller than 11 pt., 1-inch margins all around); Acceptable fonts are Times New Roman, and Arial). You need to address each question thoroughly and separately. In addition, focus on the following three factors: (1) statement of the problem(s) or decision(s) to be made; (2) description of your decisions or recommendations; (3) supporting logic and analyses. The questions associated with each case should help you focus your analyses. These questions appear at the end of each case or on a posted questions list. You will submit each document responding to the assignment in Moodle.

Each written memo will be evaluated using the following criteria:

1. Quality and relevance of the information included.
2. Was the analysis thorough given the page limit? How practical are the recommendations?
3. Were all the questions answered properly, separately, and thoroughly?
4. Grammar, spelling, and readability.

*Note on Case Analysis*

Cases are not like exams. You must apply information from many sources (text, lecture notes, the case itself, and outside references) to develop a recommendation that is both conceptually appropriate and managerially feasible. Make sure that you address all the questions in your analysis. You should answer each question individually as well as the analysis discussed above. Approach the case as an outside consultant brought in by a senior manager or executive.

Pay particular attention to the who, when, how, and where, dimensions of the recommendations, as well as the what. Do not dump the problem back in your client’s lap with a recommendation like “You must develop a new mission statement to better define strategic opportunities.” Give them a sample mission statement so they can see what you are recommending. Present evidence supporting the recommended course of action. Your opinions do not constitute evidence; information does. Information consists of more than simply restating case exhibit data. For example, rework case data into ratios or indexes that capture a trend. Do not just report isolated numbers, “Dunfey Hotel’s first quarter market share dropped from 27% to 23%, while Sheraton’s share improved from 39% to 44% in the same period.”

To communicate effectively remember your goal is to persuade a senior manager to implement your recommendation. Get to the point, write sparingly and convey as much relevant supporting information as possible. Avoid flowery language, slang, and colloquialisms.

**Individual Alignment and Partnership assignment:**

You will write a 2 to 3 page paper discussing how you would align an IT strategy with a business strategy including tools you would use. Additionally, you will discuss how you would develop a true partnership with the business and how IT drives business improvement and leads to a competitive advantage. You will be graded on:

1. Can you think strategically beyond the IT function
2. Do you understand how to develop an IT strategy that aligns with the business strategy
3. Creative and innovative thinking
4. You can articulate the way in which technology enables business strategy i.e., drives business improvement and leads to competitive advantage
5. You can demonstrate how you would forge a partnership with the business