

MIS 373 – 03660
Managing the Future
Spring 2007

UTC 1.146 MW 9:30 – 11:00

Instructor	Office	Phone	E-mail
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TA:			

Office hours: M, W 11:00 am to 12:30 pm or please email me to make an appointment.

Course Objectives

This course addresses the issue of the management of uncertainty. Note that the notion dealt with is “uncertainty” and not “risk”—the distinction being that risk is measurable and uncertainty is not. We will investigate different structured approaches that managers can use to deal with an uncertain future. The course will introduce participants to managerial concepts and methods for structuring decisions about the future of industries, products, markets, and technologies. Since this is a first-time offering there will be uncertainty in some areas of the course itself.

Participants will be expected to take an entrepreneurial approach to the course itself and to aid in the development of the materials and methods as we go along. A high tolerance for ambiguity is an essential requirement for participation in the course. Methodologies to be covered will include scenario analysis, technology roadmaps, and dynamic innovation models. Participants will work in teams and undertake a series of hands-on exercises aimed at developing a set of alternative futures for an industry (e.g., entertainment, computing, etc.) and a technology (e.g., nanotechnology, wireless, etc.) of the team’s choosing. Guest speakers from industry will include practicing futurologists and consultants.

Prerequisite: upper-division standing.

Class Structure and Organization

This class will be conducted in a discussion/seminar format. The class is designed to help you understand important concepts about managing uncertainty using a variety of learning approaches. Prior to class you are expected to read the assigned materials, prepare cases, reflect on your own knowledge of dealing with uncertainty, and work with a team on a project. During class sessions, we will discuss the assigned readings or cases. Occasionally I will lecture on concepts or issues not covered in the readings. We may also discuss short cases to be handed out in class.

The class schedule shows each day's topic and reading assignments. All changes to this schedule will be announced in class and posted on the class Blackboard Web site. I do not expect all the readings to be necessarily self-explanatory. If you find yourself confused about any assigned materials, please bring it up in class— these are often good discussion issues.

I encourage you to take an active role in this course by providing me with your feedback and comments about the course throughout the semester. Please do so by contacting me directly – individually, collectively

or via delegates – as early as possible rather than waiting for a formal feedback survey. Feedback is an important part of continuous improvement. Please let me know if there is anything I can do to make this class better for you.

Required Materials:

REQUIRED BOOKS:

1) Wendell Bell, **Foundations of Futures Studies: Human Science for a New Era: History, Purposes, Knowledge (Human Science for a New Era, 1)** (Paperback) Transaction Publishers (September 1, 2003) ISBN-10: 0765805391 ISBN-13: 978-0765805393

2. Liam Fahey and Robert Randall, **Learning from the Future: Competitive Foresight Scenarios**, (Hardcover), John Wiley & Sons, Inc. (May 12, 2004) ISBN-10: 0471303526 ISBN-13: 978-0471303527

OTHER:

Selected Readings Packet: UT Printing, GSB.

Material posted to the course Blackboard Web site.

Grading

ITEM	Weight
Class participation	40%
Presentation Evaluations	10%
Team Project	50%

A grade of X (incomplete) is very uncommon and will be given only for very unusual circumstances (e.g., medical emergencies for you or your immediate family members that occur after the official drop date). You are required to provide sufficient evidence of the problem and notify me as soon as it occurs. **NOTE:** A student receiving an incomplete grade in the course is required to complete such work by the end of the next semester.

GRADING APPEALS. Any grade appeals should be summarized in an email and sent to me. Appeals must be filed within 1 week after the graded item has been returned to you.

Students with Disabilities

The University of Texas at Austin provides upon request appropriate academic accommodations for qualified students with disabilities. Any student with a documented disability (physical or cognitive) who requires academic accommodations should contact the Services for Students with Disabilities area of the Office of the Dean of Students at 471-6259 (voice) or 471-4641 (TTY for users who are deaf or hard of hearing) as soon as possible to request an official letter outlining authorized accommodations.

Policy on Scholastic Dishonesty

The McCombs School of Business has no tolerance for acts of scholastic dishonesty. The responsibilities of both students and faculty with regard to scholastic dishonesty are described in detail in the Policy Statement on Scholastic Dishonesty for the McCombs School of Business. You can find a copy of this policy at this location: http://www.mcombs.utexas.edu/udean/Scholastic_Responsibility.asp

By teaching this course, I have agreed to observe all of the faculty responsibilities described in that document. By enrolling in this class, you have agreed to observe all of the student responsibilities described in that document. If the application of that Policy Statement to this class and its assignments is unclear in any way, it is your responsibility to ask me for clarification. Students who violate University rules on scholastic dishonesty are subject to disciplinary penalties, including the possibility of failure in the course and/or dismissal from the University. Since dishonesty harms the individual, all students, and the integrity of the University, policies on scholastic dishonesty will be strictly enforced. You should refer to the Student Judicial Services website at <http://deanofstudents.utexas.edu/sjs/> or the General Information Catalog to access the official University policies and procedures on scholastic dishonesty as well as further elaboration on what constitutes scholastic dishonesty.

Class Web Site

The class Web site can be found by going to <http://courses.utexas.edu>. Prior to each class (the day before) I will post to this web site any PowerPoint slides that I will use in class. You are welcome to download or print out these slides if they will help you participate in class. Please check the Web site regularly for the most up-to-date assignments, announcements and information.

CLASS PARTICIPATION

In this class much of the learning is dependent on the accessing the combined knowledge and experience of the group. It is everyone's job to keep the discussion productive and moving forward. In class discussions it is equally important to talk about *how* to do something as it is to talk about *what* to do.

Contributions don't all have to be original flashes of insight - but these are very welcome! Class members who summarize, clarify, simplify, ask relevant questions or suggest what else needs to be covered can also make a valuable contribution. If you are shy about contributing, prepare well and speak longer when you have the floor. If you are confident about speaking in public, focus on increasing the quality to airtime ratio of your contributions. I encourage you to take some risks in this class, assuming you are well prepared.

In evaluating your contribution to class learning I take many factors into account. Things I view positively include:

- asking insightful questions about assigned readings
- redirecting a discussion when the current point has been adequately covered
- good analysis supported by case facts or your own experience
- summarizing or reconciling previous comments
- constructive disagreement
- synthesizing and advancing the discussion
- a good sense of humor
- drawing generic learning points from a particular case.

Factors I view negatively include:

- lack of involvement - silence, detachment or disinterest
- leading our discussion into unrelated topics
- spending undue amount of time on minor points
- long, rambling comments.
- being absent or unprepared, or passing on a cold call

Finally, since you are being graded on participation, it behooves you to use a name card and sit roughly in the same place each class. If you are concerned about your contribution to class learning please make an appointment to see me.

Team Project

There will be a team project associated with the course. I expect you each to form or join a team to be made up of **five** students no later than the fourth class session. The project is described in separate document. There are several deliverables and hence several deadlines associated with this project; these are noted on the outline. More details on each deliverable are provided in the project area of Blackboard.

THE GENERAL IDEA:

The world changes so rapidly that something new today may be outdated tomorrow. Given this level of volatility, it is important to know not only something about current options but also to know how to research and evaluate future developments that are in the pipeline. The primary purpose of this project is to introduce you to a way of learning how to quickly develop a sense of the business landscape surrounding new technologies/markets/competitors/etc. Your project will probably be mainly based on secondary sources (e.g., the Web, the library, newspapers, magazines, etc.), but you may also include some primary source material. The final purpose of the project is to give you an opportunity to apply what you've learned in the course to a real situation.

First-half Course Deliverable: Scenario Grid

The primary purpose of this project is to introduce you to a way of learning how to quickly develop a sense of the business landscape surrounding new technologies/markets/ competitors/etc..

1. Your team is to select an industry or arena for the analysis.
2. Identify the key issue to be answered by the analysis.
3. Establish the time and scope of the analysis.
4. Identify the current major stakeholders.

Identify their current interests,

Indicate whether and why these interests have changed over time in the past.

5. Identify known basic trends and for the technology trend, present a roadmap.
6. Assess to what degree these trends will affect your industry/technology by grouping them into categories of: Important/Less Important/Relatively Unimportant.
7. Identify the two major dimensions that will affect the future of your chosen industry/technology and develop a two-dimensional scenario analysis with four quadrants.
8. Describe the four quadrants and identify the winners and losers in each quadrant.
9. Select what you think is the most favorable scenario for the industry incumbents. Give the scenario a descriptive name to aid the audience. Justify your choice.
10. Select what you think is the most favorable scenario for the industry entrants. Give the scenario a descriptive name. Justify your choice.
11. Select what you think is the most likely scenario. Give the scenario a descriptive name. Justify your choice by noting early indicators that support your selection..
12. Select what you think is the most favorable scenario for the industry customers. Give the scenario a descriptive name. Justify your choice.

NOTE: This material was drawn from a number of sources including Peter Schwartz, Wikipedia, & Michael Porter.

Course Deliverable Two: Porter Scenario

The primary purpose of this project is to introduce you to an more structured way to generate scenarios for technologies/markets/ competitors/etc. This project will build on the scenario grid you did in the first half of the course (but note that you may need to revise your assumptions, etc. for this project).

1. Identify known basic trends
2. Assess to what degree these trends will affect the industry issue by grouping them into categories of: Important/Less Important/Relatively Unimportant.
3. Identify major driving forces behind the existing trends and new forces that might emerge.
 - *a) industry trends.
 - *b) economic trends.
 - *c) political trends.
 - *d) technological trends.
 - *e) legal trends.
 - *f) societal trends.
4. Identify key certainties with respect to the driving forces.
5. Assess to what degree these certain forces will affect your key issue by grouping them into categories of: Important/Less Important/Relatively Unimportant.
6. Identify key uncertainties with respect to the driving forces.
7. Assess to what degree these uncertain forces will affect your industry/technology by grouping them into categories of: Important/Less Important/Relatively Unimportant.
8. Undertake a Porter Scenario Analysis by:
 - *a) Make range of plausible assumptions about the important driving forces
 - *b) Combine assumptions into scenarios
 - *c) Analyze industry behavior under each scenario
 - *d) Determine strengths/weaknesses under each scenario
 - *e) Predict competitor behavior
9. Select what you think is the most favorable scenario for the industry incumbents. Give the scenario a descriptive name to aid the audience. Justify your choice.
10. Select what you think is the most favorable scenario for the industry entrants. Give the scenario a descriptive name. Justify your choice.
11. Select what you think is the most favorable scenario for the industry customers. Give the scenario a descriptive name. Justify your choice.
12. Select what you think is the most likely scenario. Give the scenario a descriptive name. Justify your choice by noting early indicators that support your selection..
13. Identify winning and losing strategies in each of the four selected scenarios. Justify your choices.
14. Identify which current stakeholders will have to change their strategies in each selected scenario in order to a) survive and b) thrive.
15. Identify which of the current stakeholders (if any) are doomed.

NOTE: This material was drawn from a number of sources including Peter Schwartz, Wikipedia, & Michael Porter.

Class	Date	Project Deliverable
5	02/01	Identification of team membership and project topic.
14/15	03/06 & 03/08	Presentation of Scenario Grid
23	04/12	Progress Report
28/29	04/30 & 05/02	Final Porter Scenario Presentation
	05/06	Final Project Report

Please feel free to get in touch with me if you have any questions about your project at any time.

Peer Evaluation: At the end of the semester you will hand in a peer evaluation for your project team. When the final project is graded, it will be assigned a score from 0 to 100. Each of the N members of a project team will be given $100 \times N-1$ points to allocate among the other members of the team. The individual's peer weight will be the average of the allocations from his or her team members (usually 100). An individual's project grade will be the team project's score weighted by the individual's peer weight. Peer evaluations suggest that peers should be evaluated on:

- * Prompt and reliable attendance at scheduled meetings or working periods
- * Getting individual sub-tasks completed on time
- * Taking on difficult tasks
- * Contributing ideas on a regular basis
- * Contributing specialized skills or knowledge
- * Facilitating effective team interaction
- * Keeping attitudes positive throughout the process

OUTLINE 01/13/07

Bell, Foundations of Futures Studies
Fahey & Randall, Learning from the Future

Items marked with an “(E)” are posted to the course website’ items marked with an “(L)” are available through the UT Library on-line (on campus, click on the underlined link, off campus cut and paste whole URL into browser), for best graphics, download the PDF.

Class	Date	Topic	Assignment
1	01/17	Introduction: Managing the Future	(E) “Future Shock”, Peter Schwartz, <u>Fortune</u> , March 21, 2004, (E) “Scenario planning” Wikipedia, http://en.wikipedia.org/wiki/Scenario_planning
2	01/22	Strategy Introduction The Context	Bell, Chapter 1, Future Studies: A New Field Of Inquiry pp. 1 -72. Fahey & Randall, Chapter 1, What Is Scenario Learning?; Liam Fahey & Robert Randall (E) “How to Build Scenarios” Lawrence Wilkinson, Hotwired, 1998, http://www.wired.com/wired/scenarios/build.html
3	01/24	Strategy Introduction Porter’s Model	Bell, Chapter 2, The Purposes of Futures Studies pp. 73-114 Fahey & Randall, Chapter 2, Integrating Strategy and Scenarios; Liam Fahey & Robert Randall (E) Porter, M. E., “Strategy: The Core Concepts”, Chapter 1 in: Competitive Advantage, Free Press, 1985. Also available free on- line at http://www.simonsays.com/excerpt.cfm?isbn=0684841460 (E) “Spinning the Future” by Joe Flower, The Well, http://www.well.com/user/bbear/change12.html
4	01/29	Value Chain & Generic Strategies	Bell, Chapter 3, Assumptions of Futures Studies pp. 115-164. Fahey & Randall, Chapter 3, Using Scenarios to Identify, Analyze, and Manage Uncertainty; Brian Marsh
5	01/31	Scenario Construction Team & Topic Due	Bell, Chapter 4, Is Future Studies an Art or a Science? pp. 165- 189. Fahey & Randall, Chapter 4, Plotting Your Scenarios; Peter Schwartz and James Ogilvy Fahey & Randall, Chapter 11, Industry Scenarios; Liam Fahey
6	02/05	Competitor Analysis	Bell, Chapter 6, Methods and Exemplars In Futures Research, pp. 239-317. Fahey & Randall, Chapter 12, Competitor Scenarios: Projecting a Rival’s Marketplace Strategy; Liam. Fahey

7	02/07	Trends & Roadmaps	(E) Ruefli, T., Whinston, A., and Wiggins, R., “The Digital Technological Environment,” (E) “Pushing The Limits”, Carol Levin, PC Magazine, 07.13.04 p. 104,
8	02/12	Speaker TBA	
9	02/14	Scenario Planning II	Fahey & Randall, Chapter 7, Testing Your Strategies in Scenarios; Charles Perrottet (E) Scenario Learning, Ellis, Jeff, Feinstein, Steve, Stearns, Dennis, Journal of Financial Planning; Apr2000, Vol. 13 Issue 4, p82-90
10	02/19	Scenario Thinking & Example	(E) Schoemaker, Paul. "Scenario Planning: A Tool for Strategic Thinking." Sloan Management Review 36.2 (1995):25-.
11	02/21	Strategic Thinking	Fahey & Randall, Chapter 14, Customer-Driven Scenario Planning; John Kania
12	02/26	Case Discussion	NTT DoCoMo: The Future of the Wireless Internet Case
13	02/28	Speaker TBA	
14	03/05	Team	Presentation of Scenarios
15	03/7	Team	Presentation of Scenarios
		SPRING BREAK	
16	03/19	Scenario Analysis (Porter)	Porter, M. E., “Scenario Analysis”, Chapter 13 in: <i>Competitive Advantage</i> , Free Press, 1985.
17	03/21	Speakers 5:00 – 6:30 pm	Tony Tsai (Director of P&G Global Operations Innovation Centers) and Bob Johansen of the Institute for the Future (http://www.iff.org/)
18	03/26	Global Issues II	Fahey & Randall, Chapter 10, Scenarios for Global Investment Strategy for the New Century; Peter Schwartz and James will Oligvy. (E) “The demographic deficit: How aging will reduce global wealth”, Farrell, Diana, McKinsey Quarterly; 2005 Issue 2, p61-66. (E) World population 'to level off at 9b in 2300', AP, 2004, http://www.cnn.com/2004/US/11/05/un.world.population.ap/index.html
19	03/28	Science & Technology	(L) “Seven New Technologies That Change Everything” Matthew Maier, Om Malik, David Pescovitz, G. Pascal Zachary, Business Week, September 01, 2004 p. 82
20	04/02	Speaker TBA	Fahey & Randall, Chapter 18, Imagining South Africa's Future: How Scenarios Helped Discover Common Ground; Adam Kahane
21	04/04	IT and	Fahey & Randall, Chapter 22, How Information Technology

		Scenarios	Helps Scenarios Advance from Consensus to Decisiveness; Patrick Noonan and Mason Tenaglia
22	04/09	Team	PROJECT WORK
23	04/11	Industry Dyanmics Team Progress Report Due	(E) Disruptive Technology Reconsidered, Erwin Danneels, J Prod Innov Manag 2004;21:246–258, (E) “A Diagnostic for Disruptive Innovation”, Scott D. Anthony, Mark W. Johnson, and Matt Eyring, http://hbswk.hbs.edu/item.jhtml?id=4300&t=innovation HBS Working Knowledge, Aug. 9, 2004
24	04/16	Speaker TBA	(E) “Turning on the Tap: Is Water the Next Oil?”, Garry Emmons, HBSWK Pub. Date: Oct 17, 2005. (E) “Desalination & Water Purification Technology Roadmap,” Sandia National Laboratories, Jan. 2003.
25	04/18	Global Issues III	(E) “It’s a Flat World, After All” Thomas L. Friedman, New York Times Magazine April 3, 2005, http://www.nytimes.com/2005/04/03/magazine/03DOMINANCE.ht ml (E) “Why the World Is Flat” Daniel H. Pink, Wired May 2005 p. 151, http://www.wired.com/wired/archive/13.05/friedman.html
26	04/23	Global Issues IV	(E) “Global Warming” John Carey, with Sarah R. Shapiro Business Week, August 16, 2004 p. 60 http://www.businessweek.com/magazine/content/04_33/b3896001 mz001.htm Fahey & Randall, Chapter 20, The Effective Implementation of Scenario Planning: Changing the Corporate Culture; Ian Wilson Fahey & Randall, Chapter 25, Twenty Common Pitfalls in Scenario Planning; Paul Shoemaker
27	04/25	Team	PROJECT WORK
28	04/30	Team	Final Presentations
29	05/02	Team Course/Instruct or Survey	Final Presentations
	05/06	Final Project Report Due	

Articles and Cases in Reading Packet

Porter, M. E., "Scenario Analysis", Chapter 13 in: *Competitive Advantage*, Free Press, 1985.
"NTT DoCoMo: The Future of the Wireless Internet" Harvard Business School Case, Product # 9-701-013.

On-Line Course Resources

These resources are best accessed from the electronic version of this list on the course Blackboard Web site.

Baseline Magazine <http://www.baselinemag.com/>
Business 2.0 <http://business2.com/>
Byte: www.byte.com
CIO Insight
CIO Magazine: www.cio.com
ComputerWorld: www.computerworld.com/index.html
Electronic Commerce World Online Magazine
Fast Company
HotWired Magazine: hotwired.com/
IEEE Publications: www.computer.org/epub/
Information Week: www.informationweek.com
InfoWorld: www.infoworld.com
Internet Week: www.internetwk.com
New York Times 7 Day Technology Articles
PC Magazine: www8.zdnet.com/pcmag/
PCWeek On-Line: www.PCweek.com
Red Herring
The Well <http://www.well.com>
Windows Magazine: www.winmag.com/
Wired Magazine: www.wired.com/wired/

RESEARCH SITES

Barlow's The Economy of Ideas
Business Researcher's Interest: <http://www.brint.com/>
Federal Electronic Commerce Program Office
Gartner: Available through UT Library Website
How Stuff Works
TechWeb (CMP's Technology site): www.techweb.com
The Tower Group www.towergroup.com
Virtual School Digital Property
Webpedia <http://www.webopedia.com/>
WWW Virtual Library: www.vlib.org

ManyWorlds: <http://www.manyworlds.com/>

Scenario Links

Future Survey: <http://www.wfs.org/fsurv.htm>

Peter Schwartz Audio: <http://www.gbn.com/ArticleDisplayServlet.srv?aid=14200>

Mapping the Global Future, Report of the National Intelligence Council's 2020 Project, http://www.cia.gov/nic/NIC_globaltrend2020.html#contents

Digital Thinking Network scenarios

A collection of scenarios from groups who probably participated in some education provided with core members of Digital Thinking Network. They are arranged by year the scenarios were focusing on and not by subject.

Global Trends 2015: A Dialogue About the Future With Nongovernment Experts

A report produced in December 2000 by the US government. It is the result of a project where a lot of non-governmental experts were gathered to create a map of the future. In the end of the report you can find four scenarios as a part of the result from the project.

The Scenarios for the 21st Century Organizations

The subtitle is: *Shifting Network of Small Firms or All-Encompassing "Virtual Countries"* and it says a lot of what this scenario is all about. It is further the base scenarios behind the creation of the MIT/Sloan project *Inventing the Organizations of the 21st Century*.

Kenya at the Crossroads

Between 1998 and early 2000, a group of over 80 Kenyans representing different generations and backgrounds met to reflect on the future of the country. Their reflections are summarized in four scenarios which depict alternative futures that could evolve and what they would mean for the country. This web site brings together their experience.

World Business Council for Sustainable Development (WBCSD)

The WBCSD Scenario Unit supports companies to understand a world transitioning from an industrial way of life to a sustainable one. The WBCSD Scenarios are based on three main premises: 1) Connected risks and environmental buffers, 2) Globalisation and commoditisation of products and services, and 3) Material and meaning constraint growth.

<http://www.wbcds.org/templates/TemplateWBCSD5/layout.asp?MenuID=1>

Emissions Scenarios: 2000 - Special Report of the Intergovernmental Panel on Climate Change (IPCC)

by Nebojsa Nakicenovic and Rob Swart (Eds.)

The Intergovernmental Panel on Climate Change (IPCC) developed long-term emission scenarios in 1990 and 1992 and have now updated them in 2000.

The full report: <http://www.grida.no/climate/ipcc/emission/index.htm>

The Summary for Policymakers: <http://www.ipcc.ch/pub/sres-e.pdf>

Foresighting Around the World: A Review of Seven Best-In-Kind Programs - Battelle Seattle Research Center

By Marina Skumanich & Michelle Silbernagel <http://www.seattle.battelle.org/>

Don't Stop Thinking About Tomorrow - CIO Magazine (15 Dec 1999)

By Meridith Levinson

Article about scenario planning

http://www.cio.com/archive/010100_stop_content.html

Forecast Techniques - Technology Futures, Inc.

Some of the techniques and methodologies that Technology Futures, Inc. use to develop technology/market forecasts. The techniques are categorized by the five different ways people view the future: 1) Extrapolators, 2) Pattern Analysts, 3) Goal Analysts, 4) Counter Punchers, and 5) Intuitors.

http://www.tfi.com/rescon/TF_Techniques.html

Plausible Futures Newsletter: <http://www.plausiblefutures.com/>

Scenario Planning Resources: <http://www.well.com/~mb/scenario/>

The Futures Lab: <http://www.futures-lab.com/>

Stratfor.com: <http://www.stratfor.com/>

Shell Scenarios: http://www.shell.com/home/Framework?siteId=royal-en&FC3=/royal-en/html/iwgen/our_strategy/scenarios/dir_scenarios_28022005.html&FC2=/royal-en/html/iwgen/leftnavs/zzz_lhn5_4_0.html

Introduction to Shell Global Scenarios to 2025 by Jeroen van der Veer Chief Executive

http://www.shell.com/home/Framework?siteId=royal-en&FC2=&FC3=/royal-en/html/iwgen/our_strategy/scenarios/introduction_to_global_scenarios/intro_jvdv_scenarios_28022005.html

SHELL AIDS in Africa scenarios:

http://www.shell.com/home/Framework?siteId=royal-en&FC2=&FC3=/royal-en/html/iwgen/environment_and_society/key_issues_and_topics/issues/hiv_and_aids/hiv_aids_scenarios_18102005.html

MIT Technology Review

MIT's Technology Review Magazine: the Emerging Technologies Newsletter delivers editorial coverage of the technologies that will impact your business, your life, and the

world. Subscribe now for FREE to find out what's next in computing, infotech, biotechnology, nanotechnology and more.

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