



Course PA 6326 Decision Tools for Managers
Professor Jeremy L. Hall, Ph.D.
Term Fall Semester, 2008
Meetings Mondays 7:00-9:45 pm, WT 1.224

Professor Contact Information

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Office Location WT 1.222
Office Hours Monday, 5:30-7:00 p.m., or by appointment, or just drop by.
Other Information To ensure a timely response, please correspond with me via email at the address above. Per UTD policy, I can only consider email from your UTD account to be official.

Course Pre-requisites, Co-requisites, and/or Other Restrictions

This course is available only to doctoral students.

Course Description

Decision-making in the public sphere is often ad hoc and without rigor, resulting in operating and outcome inefficiencies as well as poor public policy choices. This class will examine the cognitive psychology of decision-making, introduce several quantitative tools for optimizing decisions and acquaint students with essential literature in the field of decision-making.

This course examines a variety of common cognitive problems in decision-making. These cognitive biases and errors result in a multitude of challenges and failures for decision-makers and the parties to these decisions. Knowledge of these cognitive errors and biases in decision-making can rationalize and improve decision-making and policy-making. The challenges of proper problem identification and problems associated with group decision-making will be examined.

Quantitative methods aimed at rationalizing and optimizing decision-making will be examined and applied. These techniques range from the elements of statistical quality control to tools of linear programming and queuing theory. These tools have applications in both organizational management and policy analysis. The course will focus on issues related to the management of public organizations and public policy, but the applications are relevant to all organizations.

Student groups will also present research findings from one of five fields relevant to contemporary decision-making. The nature of these presentations and the topics are defined in the "course requirements" section of this syllabus.

Student Learning Objectives/Outcomes

1. To improve your decision-making skills and enhance your professional competence as a decision maker.
2. To learn to apply decision tools and theories of decision making to public organizational management, policy-making and politics.
3. To enhance your awareness of current scholarship in decision-making.
4. To enhance your awareness of methods currently used to study and understand decision-making.
5. To help you provide leadership to others in better use of decision-making tools in policy-making and organizational environments.

6. To understand that a rational approach to assessing decisions should focus on process and method rather than outcomes.
7. To appreciate humility as the greatest tool a wise decision-maker can possess.

Required Textbooks and Materials

Three texts and various journal articles are required reading for this course:

Barry Render, Ralph Stair, and Michael Hanna (2009). Quantitative Analysis for Management. 10th ed. Englewood Cliffs, NJ: Prentice Hall, CD-ROM version. (*You must purchase only a new copy that includes a new CD-ROM.)

Max Bazerman (2006). Judgment in Managerial Decision Making, 6th ed., New York: John Wiley and Sons.

Max Bazerman, Jonathan Baron and Katherine Shonk (2001). You Can't Enlarge the Pie: Six Barriers to Effective Government, Cambridge, MA: Basics Books.

Required Journal Articles: The full text of required journal articles is accessible through the UTD Library web site via <http://www.utdallas.edu/library>. A valid student ID number is needed for off-campus access to these databases and journals.

Mathematical Requirements: This is not a mathematics course. The course focuses on proper problem identification, model building, data collection and application.

Nature of Class Sessions: Three hour class sessions in the evening are always a challenge. Approximately one half of each class meeting will be spent in lecture and one half will be spent in discussion and other activities.

Assignments & Academic Calendar

Course Requirements: Each student will complete 3 graded assignments. All students will complete (1) a 15-20 page formal research paper/design, (2) a group project detailed below, and (3) a portfolio of four computer-based class assignments.

Written Assignments and Projects:

Grading for this course consists of three written assignments, two of which will be completed and graded individually, and one of which will be completed and graded as a team. Each paper should be typewritten, double-spaced, and should provide appropriate in-text references to works cited or referenced. I will assign grades for these assignments on the basis of 1) the quality of writing (which also includes grammar, spelling, structure, agreement), 2) their application of theory and analysis to the research question identified, 3) clarity and organization, 4) substantive relevance to the field of decision making, 5) the depth and breadth of knowledge they reflect, and 6) the extent to which your research relates to and supports the research question you posit. What does this mean? Your work should demonstrate your knowledge of the readings and concepts we discuss in class and the broader literature related to your topic; it should demonstrate that you understand the issues you are discussing and the concepts you are applying; and, your work should exhibit clear, high quality writing commensurate with your training in a professional graduate degree program. Assignment details are provided below:

I. Research Paper/ Design

- Each student should select a research paper topic within the field of decision- making that is relevant to his/her intended dissertation topic or research interests.
- Each paper should present (1) a clear research question and introduction, (2) a succinct review of relevant literature, (3) a theoretical development section that establishes hypotheses about relationships among the key constructs you examine, and (4) a proposed research design that indicates how you would go about examining and testing the relationships you observe. The research design should justify the relevance of your study (“who cares?”) and it should address such topics as: unit of analysis, data sources, the general methodology to be followed, any statistical methods to be utilized, and expected barriers or hurdles that may be encountered.
- The paper should be 15-20 pages in length. Only the last 2-3 pages should constitute the research design.
- Papers should include and reference no fewer than 20 journal articles from the field of decision-making. Other articles from the field of public administration, political science or fields related to your topic, as well as books, book chapters and other reports, will extend the bibliography beyond the minimum requirement.
- All references in your bibliography should be cited in the text of your paper and vice versa.
- Limit the use of direct quotes from other authors.
- The journals noted in the bibliographies of the Bazerman (2006) text and the Render, Stair and Hanna (2009) text should serve as excellent resources for your papers. However, a broad cross-section of journals is preferred.
- You should reference assigned class readings relevant to your topic in such a way that your understanding of the concepts is revealed.
- Submit a one-paragraph abstract of your intended paper topic on September 15, 2008, for Professor Hall’s review.
- See other general policies listed below.
- Papers are due in class on December 8, 2008, but will be accepted at any time prior to the deadline.

II. Portfolio:

- The portfolio will include only the computer-based exercises handed-out in class on October 13, October 20, November 3 and November 10.
- Each portfolio entry will include a hard copy of the completed computer assignment results and of any relevant graphs or figures.
- Each portfolio entry will include a one-paragraph explanation of the results of the completed computer-based assignment.
- Staple the assignments together with a cover page and submit them December 08, 2008.

III. Group Presentation:

- Students will be assigned to groups of 3-4 to address an assigned topic.
- This is a formal presentation – use any form of media you think necessary.
- Each group must identify one article on their topic to be read by all students prior to their presentation (Please use articles that are available through the Library’s on-line databases if at all possible).
- Please be sure to explore the *implications* of the topic for decision-making in public administration, politics and policy. What are the big issues? Why should we care?

- Please be sure that the presentation highlights: (1) the methods used by scholars to explore the topic (e.g. small group studies, MRI brain images, computer simulations); and (2) a hard copy list (distributed to all students and the professor) of 10-15 articles or books you think should be required reading on the topic.
- Presentations should be 30-45 minutes and allow sufficient time for questions and discussion.
- Groups must provide to their peers and the professor the article of assigned reading no later than November 10, 2008.
- Topics for group presentations are:
 - Behavioral Economics and Neuroeconomics
 - Cross-Cultural Decision Making
 - Game Theory
 - Agent-Based Modeling
 - Effects of Complexity on Decision Making

Software Issues

You should load the QM for Windows from the Render, Stair and Hanna (2009) text on your own personal computer/laptop at work and/or home. This software is required to complete the computer-based assignments between October 13 and November 10.

Grading Policy

Grading for this course shall be on a standard scale as follows: 90-100=A, 80-89=B, 70-79=C, Below 70=F. If appropriate, these grades will be determined through scaling. A grade of “A” will not be awarded to any student who performs well in the first three course requirements but who does not actively contribute to class discussions by asking and answering questions. Points shall be awarded as follows:

Research Paper	60%
Group Project	20%
Portfolio	20%

Course Schedule*:

** Readings and assignments are to be completed in advance of the dates indicated. The reading requirements and timelines are tentative and subject to change at the Professor’s discretion.*

8/25 Course Introduction

Course Overview

Introduction to the field(s) – What Drives Decision-Making?

The question of Rationality

Testing your own decision-making prowess.

9/01 Labor Day (University Holiday, No Class)

9/08 Theories of Decision-Making

Render, Stair and Hanna (2009), Chapters 1-2

Simon, Herbert A. "Rational Decision Making in Business Organizations." *The American Economic Review* 69, no.4 (September 1979): 493-513.

Kahneman, Daniel. "A Perspective on Judgment and Choice: Mapping Bounded Rationality." *American Psychologist* 58, no.9 (September 2003): 697-720.

Cohen, Michael, James March and Johan Olsen. "A Garbage Can Model of Organizational Choice." *Administrative Science Quarterly* 17, no.1 (March 1972): 1-25.

Weick, Karl. "Puzzles in Organizational Learning: An Exercise in Disciplined Imagination." *British Journal of Management* 13 (2002): s7-s15.

9/15 Cognitive Biases, Framing, Preferences and the Motives of Decision Makers

Bazerman (2006), Chapters 1-4.

Barsade, Sigal and Donald Gibson. "Why Does Affect Matter in Organizations?" *The Academy of Management Perspectives* 12, no. 1 (February 2007): 36-59. Note – this journal was formerly entitled the *Academy of Management Executive* – you may find that it is necessary to search under this title.

Estrada, Carlos, Alice Isen and Mark Young. "Positive Affect Facilitates Integration of Information and Decreases Anchoring in Reasoning Among Physicians." *Organizational Behavior and Human Decision Processes* 72, no.1 (October 1997): 117-135.

<Paper Topic Abstract Due>

9/22 Group Decision-Making

Bazerman (2006), Chapters 8-11

Kerr, Norbert, L. and R. Scott Tindale. "Group Performance and Decision Making." *Annual Review of Psychology* 55 (2004): 623-655.

Schafer, Mark and Scott Crichlow. "Antecedents of Groupthink: a quantitative study." *Journal of Conflict Resolution* 40, no.3 (September 1996): 415-435.

9/29 Soft Systems Tools – Systems Thinking Tools for Decision Analysis.

Barry Richmond, (1993). "Systems Thinking: critical thinking skills for the 1990s and beyond." *System Dynamics Review*, 9:2, pp. 113-133.

10/06 Fairness and Big Policy Questions

Bazerman (2006), Chapter 6

10/13 Decision Making Under Risk; Decision Tables and Decision Trees

Render, Stair and Hanna (2009), Chapter 3

<Bring Laptops with QM for Windows software loaded>

10/20 Statistical Quality Control; Natural Variation and Learning

Render, Stair and Hanna (2009) Chapter 17

W.E. Deming, "On Probability as a Basis for Action", *The American Statistician*, Nov. 1975, 29:4, pp. 146-152.

<Bring Laptops with QM for Windows software loaded>

10/27 Decision Making and Strategic Thinking

Hall, Jeremy L. 2007. "Implications of Success and Persistence for Public Sector Performance." *Public Organization Review*, 7(3): 281-297.

Fiorino, Daniel J. 1990. Can problems shape priorities? The case of risk-based environmental planning. *Public Administration Review* 50(1): 82-90.

Hall, Jeremy L. and Edward T. Jennings, Jr. 2008. "Taking Chances: Evaluating Risk as a Guide to Better Use of Best Practices." *Public Administration Review*, 68 (4): 695-708.

Howell-Moroney, Michael E. & Jeremy L. Hall. 2008. "Waste in the Sewer: The Collapse of Accountability and Transparency in Public Finance in Jefferson County, Alabama." Unpublished Manuscript. (To be distributed electronically.)

11/03 Queuing Theory - Waiting, Civilization and Efficiency

Render, Stair and Hanna (2009), Chapter 14

David H. Maister, "The Psychology of Waiting Lines," 2005.
www.davidmaister.com/pdf/PsychologyofWaitingLines751.pdf. (accessed August 19, 2008) - NOTE - the word psychology is misspelled in the URL.

11/10 Linear Programming; Optimization with Constraints

Render, Stair and Hanna (2009), Chapters 7-9

Green, Linda, Sergei Savin and Ben Wang. "Managing Patient Service in a Diagnostic Medical Facility." *Operations Research*, 54, no.1 (January/February 2006): 11-25.

<Groups distribute assigned article to peers>

11/17 Escalation and Big Policy Decisions

Max Bazerman, Jonathan Baron and Katherine Shonk (2001), ALL

11/24 Student Presentations; Peer assigned reading

12/01 Student Presentations; Peer assigned reading

12/08 Improving Decision-Making and Non-Quantitative Decision Tools

Nominal group technique and the Delphi Method

Lessons Learned

Bazerman (2006), Chapter 12

<Papers and Portfolios Due>

Course Policies

Late Work

Barring significant intervening circumstances, I generally do not accept late assignments. You are responsible for completing assignments by their deadlines.

Class Attendance

All students are expected to attend each class session and participate fully; this implies that all assigned readings should be completed in advance.

Classroom Citizenship

Students are to treat each other with respect at all times. Arriving at class without being adequately prepared to discuss the assigned readings is disrespectful and discourteous to your fellow students.

Laptop Policy in the Classroom

I do not allow students to take notes with laptops in class because these technologies supply distractions that simple hand written note taking does not. Experience has taught me that even the best-intentioned students succumb to these distractions sooner or later if given the opportunity. Students should bring their laptops to class on October 13 and October 20 during which sessions we will use the QM for windows software to perform calculations and produce graphs.

Policy Regarding Cellular Phones, and Other Small Electronic Devices in the Classroom

Cellular telephones, pagers, and other similar electronic devices are not permitted on aircraft because they may cause interference in planes' in-flight control systems. Because such devices also provide distractions that interfere with the teaching and learning process, they are not permitted in this class. Unless you are a law enforcement or other emergency personnel officer, please turn all such devices to the OFF position prior to entering the classroom. You may use them during breaks and after class if you wish.

Preferred Style for Citations and Bibliography

The University now requires that all Ph.D. dissertations use the Turabian style for citations and bibliographies. The public affairs faculty now requires that all public affairs students use this style in all of their papers. It is simply good practice to begin using a style that is required for your dissertation. Please obtain a copy of Kate L. Turabian. *A Manual for Writers of Research Papers, Theses and Dissertations* 7th ed. Chicago: University of Chicago Press, 2007.

Writing Etiquette

I only accept assignments that have been carefully formatted and proofread. You must ensure that pages are numbered, text is double-spaced, paragraphs are indented, all four margins must be at least one inch, text must be in a standard font such as Calibri or Times New Roman (You will notice that I prefer Times New Roman). Font size must be 12-point. Spelling should be checked. Grammar should be correct, so agreement, possessives, etc., should all be accurate. Sentences should be clear and understandable. You should include a title page, and it should include your name, the paper title, and other necessary identifying information.

Research Etiquette

I wish to judge you on the basis of your knowledge and understanding, not someone else's. That being said, I strongly object to the use of encyclopedias as documentation for research papers. In particular, online encyclopedias are generally not acceptable sources for work in this course. Appropriate sources can usually be found in print, and the library is full of them. I appreciate research that refers to a variety of books, academic journals, periodicals, and research and policy reports. Many useful items can be obtained through the internet, but I urge you to exercise caution in selecting sources that are reputable and sound. If you have any questions, please ask in advance.

Attendance and Preparation

This is a graduate class. As graduate students, I expect each of you to be fully prepared for and participate in each class. I also expect each student to be an active participant in class discussions and exercises.

Technical Support

If you experience any problems with your UTD account you may send an email to: assist@utdallas.edu or call the UTD Computer Helpdesk at 972-883-2911.

Field Trip Policies / Off-Campus Instruction and Course Activities

Off-campus, out-of-state, and foreign instruction and activities are subject to state law and University policies and procedures regarding travel and risk-related activities. Information regarding these rules and regulations may be found at the website address http://www.utdallas.edu/BusinessAffairs/Travel_Risk_Activities.htm. Additional information is available from the office of the school dean. Below is a description of any travel and/or risk-related activity associated with this course. (Not Applicable)

Student Conduct & Discipline

The University of Texas System and The University of Texas at Dallas have rules and regulations for the orderly and efficient conduct of their business. It is the responsibility of each student and each student organization to be knowledgeable about the rules and regulations which govern student conduct and activities. General information on student conduct and discipline is contained in the UTD printed publication, *A to Z Guide*, which is provided to all registered students each academic year.

The University of Texas at Dallas administers student discipline within the procedures of recognized and established due process. Procedures are defined and described in the *Rules and Regulations, Series 50000, Board of Regents, The University of Texas System*, and in Title V, Rules on Student Services and Activities of the university's *Handbook of Operating Procedures*. Copies of these rules and regulations are available to students in the Office of the Dean of Students, where staff members are available to assist students in interpreting the rules and regulations (SU 1.602, 972/883-6391) and online at <http://www.utdallas.edu/judicialaffairs/UTDJudicialAffairs-HOPV.html>

A student at the university neither loses the rights nor escapes the responsibilities of citizenship. He or she is expected to obey federal, state, and local laws as well as the Regents' Rules, university regulations, and administrative rules. Students are subject to discipline for violating the standards of conduct whether such conduct takes place on or off campus, or whether civil or criminal penalties are also imposed for such conduct.

Academic Integrity

The faculty expects from its students a high level of responsibility and academic honesty. Because the value of an academic degree depends upon the absolute integrity of the work done by the student for that degree, it is imperative that a student demonstrate a high standard of individual honor in his or her scholastic work.

Scholastic Dishonesty, any student who commits an act of scholastic dishonesty is subject to discipline. Scholastic dishonesty includes but is not limited to cheating, plagiarism, collusion, the submission for credit of any work or materials that are attributable in whole or in part to another person, taking an examination for another person, any act designed to give unfair advantage to a student or the attempt to commit such acts.

Plagiarism, especially from the web, from portions of papers for other classes, and from any other source is unacceptable and will be dealt with under the university's policy on plagiarism (see general catalog for details). This course will use the resources of turnitin.com, which searches the web for possible plagiarism and is over 90% effective.

Copyright Notice

The copyright law of the United States (Title 17, United States Code) governs the making of photocopies or other reproductions of copyrighted materials, including music and software. Copying, displaying, reproducing, or distributing copyrighted works may infringe the copyright owner's rights and such infringement is subject to appropriate disciplinary action as well as criminal penalties provided by federal law. Usage of such material is only appropriate when that usage constitutes "fair use" under the Copyright

Act. As a UT Dallas student, you are required to follow the institution's copyright policy (Policy Memorandum 84-I.3-46). For more information about the fair use exemption, see <http://www.utsystem.edu/ogc/intellectualproperty/copypol2.htm>

Email Use

The University of Texas at Dallas recognizes the value and efficiency of communication between faculty/staff and students through electronic mail. At the same time, email raises some issues concerning security and the identity of each individual in an email exchange. The university encourages all official student email correspondence be sent only to a student's U.T. Dallas email address and that faculty and staff consider email from students official only if it originates from a UTD student account. This allows the university to maintain a high degree of confidence in the identity of all individual corresponding and the security of the transmitted information. UTD furnishes each student with a free email account that is to be used in all communication with university personnel. The Department of Information Resources at U.T. Dallas provides a method for students to have their U.T. Dallas mail forwarded to other accounts.

Withdrawal from Class

The administration of this institution has set deadlines for withdrawal of any college-level courses. These dates and times are published in that semester's course catalog. Administration procedures must be followed. It is the student's responsibility to handle withdrawal requirements from any class. In other words, I cannot drop or withdraw any student. You must do the proper paperwork to ensure that you will not receive a final grade of "F" in a course if you choose not to attend the class once you are enrolled.

Student Grievance Procedures

Procedures for student grievances are found in Title V, Rules on Student Services and Activities, of the university's *Handbook of Operating Procedures*.

In attempting to resolve any student grievance regarding grades, evaluations, or other fulfillments of academic responsibility, it is the obligation of the student first to make a serious effort to resolve the matter with the instructor, supervisor, administrator, or committee with whom the grievance originates (hereafter called "the respondent"). Individual faculty members retain primary responsibility for assigning grades and evaluations. If the matter cannot be resolved at that level, the grievance must be submitted in writing to the respondent with a copy of the respondent's School Dean. If the matter is not resolved by the written response provided by the respondent, the student may submit a written appeal to the School Dean. If the grievance is not resolved by the School Dean's decision, the student may make a written appeal to the Dean of Graduate or Undergraduate Education, and the dean will appoint and convene an Academic Appeals Panel. The decision of the Academic Appeals Panel is final. The results of the academic appeals process will be distributed to all involved parties.

Copies of these rules and regulations are available to students in the Office of the Dean of Students, where staff members are available to assist students in interpreting the rules and regulations.

Incomplete Grade Policy

As per university policy, incomplete grades will be granted only for work unavoidably missed at the semester's end and only if 70% of the course work has been completed. An incomplete grade must be resolved within eight (8) weeks from the first day of the subsequent long semester. If the required work to complete the course and to remove the incomplete grade is not submitted by the specified deadline, the incomplete grade is changed automatically to a grade of **F**.

Disability Services

The goal of Disability Services is to provide students with disabilities educational opportunities equal to those of their non-disabled peers. Disability Services is located in room 1.610 in the Student Union. Office hours are Monday and Thursday, 8:30 a.m. to 6:30 p.m.; Tuesday and Wednesday, 8:30 a.m. to 7:30 p.m.; and Friday, 8:30 a.m. to 5:30 p.m.

The contact information for the Office of Disability Services is:

The University of Texas at Dallas, SU 22
PO Box 830688
Richardson, Texas 75083-0688
(972) 883-2098 (voice or TTY)
disabilityservice@utdallas.edu

If you anticipate issues related to the format or requirements of this course, please meet with the Coordinator of Disability Services. The Coordinator is available to discuss ways to ensure your full participation in the course. If you determine that formal, disability-related accommodations are necessary, it is very important that you be registered with Disability Services to notify them of your eligibility for reasonable accommodations. Disability Services can then plan how best to coordinate your accommodations.

It is the student's responsibility to notify his or her professors of the need for such an accommodation. Disability Services provides students with letters to present to faculty members to verify that the student has a disability and needs accommodations. Individuals requiring special accommodation should contact the professor after class or during office hours.

Religious Holy Days

The University of Texas at Dallas will excuse a student from class or other required activities for the travel to and observance of a religious holy day for a religion whose places of worship are exempt from property tax under Section 11.20, Tax Code, Texas Code Annotated.

The student is encouraged to notify the instructor or activity sponsor as soon as possible regarding the absence, preferably in advance of the assignment. The student, so excused, will be allowed to take the exam or complete the assignment within a reasonable time after the absence: a period equal to the length of the absence, up to a maximum of one week. A student who notifies the instructor and completes any missed exam or assignment may not be penalized for the absence. A student who fails to complete the

exam or assignment within the prescribed period may receive a failing grade for that exam or assignment.

If a student or an instructor disagrees about the nature of the absence [i.e., for the purpose of observing a religious holy day] or if there is similar disagreement about whether the student has been given a reasonable time to complete any missed assignments or examinations, either the student or the instructor may request a ruling from the chief executive officer of the institution, or his or her designee. The chief executive officer or designee must take into account the legislative intent of TEC 51.911(b), and the student and instructor will abide by the decision of the chief executive officer or designee.

These descriptions and timelines are subject to change at the discretion of the Professor.