

**Argosy University**  
**COURSE SYLLABUS**

*B7783*

*Solution-Oriented Decision Models*

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**Faculty Information**

**Faculty Name:**

**Campus:**

**Contact Information:**

**Office Hours:**

**Short Faculty Bio:**

**Course description:**

This graduate course provides an in-depth review and analysis of the latest theories and research to provide the advanced graduate student with an understanding of various models of decision making and how to select the best combination for appropriate solutions. The methods cover quantitative, qualitative, game theory, group dynamics, expert systems, ethical, and logical theories, research, and methods. Focus includes developing and instituting decision making audits to evaluate decision[s] that are to be or have been made. The use of information systems technology for decision support systems is analyzed. Communication projects will focus on critical thinking, problem solving, and decision making based on relevant research, information literacy, applied technology, integration, ethical and diversity concerns. Focused attention is on utilizing leadership and collaboration practices in solutions oriented decision making.

**Course Pre-requisites:** None

**Required Textbook:**

Golub, Andrew Lang. (1997). *Decision analysis: An integrated approach*. John Wiley & Sons. ISBN: 0-471-15511-X

**Course length:** 7.5 Weeks

**Contact Hours:** 45 Hours

**Credit Value:** 3.0

**Program Outcomes:**

**1. Research**

**1.1. Performing** – Design, conduct, and justify applied research in a business context using appropriate methodology

**1.2. Understanding** – Evaluate and apply existing theory and research to current business practice

**2. Communication**

- 2.1. **2.1Oral** – Present orally, complex business information that is concise, clear, organized, and well supported in a professional manner appropriate to the business context
- 2.2. **2.2Written** – Present in writing, complex business information that is concise, clear, organized, and well supported in a professional manner appropriate to the business context using required format
3. **Critical Thinking/Problem Solving**
  - 3.1. **3.1Critical Thinking** – Evaluate relevance of established theory to current business practice and identify gaps in current literature
  - 3.2. **3.2Problem Solving/Decision Making** – Given a business situation, diagnose the underlying causes of the situation, evaluate possible solutions, in relation to underlying business theory and determine and defend appropriate course of action
  - 3.3. **3.3Information Literacy** – Conduct an exhaustive literature search from a variety of sources, evaluate the credibility of the sources, and apply that information to create new knowledge
4. **Team**
  - 4.1. **4.1Leadership** – Given a case study or business situation involving a team, evaluate effectiveness of a team in reaching defined goals, and in resolving conflicts
  - 4.2. **4.2Collaboration** – Given a case study or business situation collect, assimilate, and disseminate the views of stakeholders
5. **Ethics/Diversity**
  - 5.1. **Ethics** – Given a case study or business situations, evaluate the ethical dimensions of decision situations and personal, social, and corporate responsibility not absolved by market forces
  - 5.2. **Diversity** – Given a case study or business situation evaluate the multicultural dimensions of decision situations and multicultural solutions to business situations

**Course Objectives:**

1. Analyze the role of decision-making and decision-making models in business and investigate how to select the best combination for appropriate solutions. Program Outcomes: 5
2. Examine the relationships between decision-making, business strategy and information. Program Outcomes: 4,5
3. Examine leadership, collaboration and accountability with regards to decision-making within an organization. Program Outcomes: 2 & 6
4. Evaluate the ethical aspects of business decision-making. Program Outcomes: 6
5. Apply and then evaluate the following decision-making techniques: quantitative, qualitative, game theory, group dynamics, expert systems, ethical, and logical theories and research. Program Outcomes: 3
6. Analyze decision support systems and how it is affected by information systems technology. Program Outcomes: 4 & 5
7. Examine expert systems and other artificial intelligence-based decision models and express what affect they might have on a business. Program Outcomes: 3, 4 & 5
8. Identify procedures for assessing and auditing decision-making policies and procedures. Program Outcomes: 5

**Assignment Table**

	<b>Topics</b>	<b>Readings</b>	<b>Assignments</b>
<b>1</b>	<p>The decision-making process in business today</p> <ul style="list-style-type: none"> <li>• Business strategy</li> <li>• Operations</li> <li>• Information</li> </ul>	<ul style="list-style-type: none"> <li>• Drucker, P. F. (2004). What Makes an Effective Executive. <i>Harvard Business Review</i>, 82(6), 58-63 (EBSCO)</li> <li>• Drucker, P. F. (1967) The Effective Decision. <i>Management Review</i>, 56(3), 52 (EBSCO)</li> </ul> <p>Information and Decision-Making:</p> <ul style="list-style-type: none"> <li>• Sanders, R. (1999). <i>Executive Decision Making Process: Identifying Problems &amp; Assessing</i> . Greenwood Publishing Group (Online Resources)</li> </ul> <p>Read Chapters 3 and 7.</p>	
<b>2</b>	<ul style="list-style-type: none"> <li>• The hierarchy of decision making responsibilities within a business</li> <li>• The ethical</li> </ul>	<p>Commission on Behavioral and Social Sciences and Education, National Research Council. (1990) <i>Distributed Decision-Making: Report of a Workshop</i> Washington, DC: National Academy Press. (Online Resources)</p>	

	<p>implications of decision-making</p>	<p>Choi, J.N., &amp; Kim, M. U. (1999). The Organizational Application of Groupthink and Its Limitations in Organizations. <i>Journal of Applied Psychology</i>, 84(2), 297-306 (EBSCO)</p> <p>Bowen, S. A., &amp; Heath, R. L. (2005). <a href="#">Issues management, systems, and rhetoric: exploring the distinction between ethical and legal guidelines at Enron.</a> <i>Journal of Public Affairs</i>, 5(2), 84 (ProQuest)</p> <p>Sims, R. L., &amp; Gegez, A. E. (2004) <a href="#">Attitudes Towards Business Ethics: A Five Nation Comparative Study.</a> <i>Journal of Business Ethics</i>, 50(3), 253 (ProQuest)</p>	
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<p>3</p>	<ul style="list-style-type: none"> <li>• The relationships among decision making: Techniques, Processes and Tools</li> <li>• The role of logic and game theory in decision-making</li> </ul>	<ul style="list-style-type: none"> <li>• Thagard, P. (2001). How to make decisions: Coherence, emotion, and practical inference. In E. Millgram (Ed.), <i>Varieties of practical inference</i> (pp. 355-371) Cambridge, MA: MIT Press. <a href="http://cogsci.uwaterloo.ca/Articles/Pages/how-to-decide.html">http://cogsci.uwaterloo.ca/Articles/Pages/how-to-decide.html</a></li> <li>• Ross, D. (2004) Game Theory. In Zalta, E. N. (Ed.), <i>The Stanford Encyclopedia of Philosophy</i> <a href="http://plato.stanford.edu/archives/win2004/entries/game-theory/">http://plato.stanford.edu/archives/win2004/entries/game-theory/</a> (Read up to and including Section 2.4)</li> <li>• Goldman, J., &amp; Papayouanou, P. (2003) <a href="#">Shaping Winning Business Strategies With Game Theory</a>. <i>Financial Executive</i>, 19(2), 70-71 (EBSCO)</li> <li>• Logic Chapter Zero, Golub</li> <li>• Sanders, R. (1999). <i>Executive Decision Making Process: Identifying Problems &amp; Assessing</i>. Greenwood Publishing Group (Online Resources) Read Chapter 2</li> </ul>	
<p>4</p>	<ul style="list-style-type: none"> <li>• The role of probability, risk and uncertainty in decision-making</li> <li>• Decision tables and decision trees</li> <li>• Utility</li> </ul>	<ul style="list-style-type: none"> <li>• Chapters One, Two, Four and Five, Golub</li> <li>• Probability Review: Appendix C, Golub</li> <li>• Uncertainty &amp; risk: Spradlin, T. <i>A Lexicon of Decision Making</i> Decision Analysis Society <a href="http://faculty.fuqua.duke.edu/daweb/">http://faculty.fuqua.duke.edu/daweb/</a></li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>

		<p><a href="#">exicon.htm#decision_maker</a></p> <ul style="list-style-type: none"> <li>• Making decisions based on risk &amp; probability:</li> </ul> <p>Parmigiani, G., &amp; Wang, W. (2004) <i>Predicting who may carry inherited susceptibility to cancer.</i> BayesMendel Lab.  <a href="http://astor.som.jhmi.edu/BayesMendel/index.html">http://astor.som.jhmi.edu/BayesMendel/index.html</a></p> <p><i>Decision Tree Analysis.</i> Mind Tools  <a href="http://www.mindtools.com/pages/article/newTED_04.htm">http://www.mindtools.com/pages/article/newTED_04.htm</a></p>	
5	<p>Quantitative methods</p> <ul style="list-style-type: none"> <li>• Linear programming</li> <li>• Inventory control models</li> <li>• Forecasting</li> </ul>	<p>Kahan, Gerald, K. (1982). Walking through a columnar approach to linear programming of a business. <i>Interfaces</i>, 12(3), 32-39 (EBSCO)</p> <p>Chambers, J. C., Mullick, S. K., &amp; Smith, D. D. (1971) How to choose the right forecasting technique. <i>Harvard Business Review</i>, 49(4), 45 (EBSCO)</p> <p>Kruger, G.A. (2005). A Statistician Looks at Inventory Management. <i>Quality Progress</i>. 38(2), 36 (ProQuest)</p>	
6	<p>Decision Support Systems.</p> <ul style="list-style-type: none"> <li>• Model Management</li> <li>• Data Management</li> <li>• User Interface Management</li> <li>• Intelligent agents</li> </ul>	<p>Power, D.J., (2000). <i>Supporting Decision-Makers: An Expanded Framework.</i> DSSResources.COM  <a href="http://dssresources.com/papers/supportingdm/sld001.htm">http://dssresources.com/papers/supportingdm/sld001.htm</a></p> <p>Power, D.J. <i>Decision Support Systems Web Tour.</i> World Wide Web, <a href="http://dssresources.com">http://dssresources.com</a>, version 4.3, January 11, 2004.  <a href="http://dssresources.com/tour/index.html">http://dssresources.com/tour/index.html</a></p> <p>Sauter, V., &amp; Free, D. (2005) <i>Competitive Intelligence Systems:</i></p>	

		Qualitative DSS for Strategic Decision Making <i>Database for Advances in Information Systems</i> , 36(2), 43 (ProQuest)	
7	<ul style="list-style-type: none"> <li>Expert systems in decision-making</li> <li>Neural networks</li> <li>Genetic algorithms</li> </ul>	<p>Coakes, E., &amp; Merchant, K. (1997). The use of expert systems in business transformation. <i>Management Decision</i>, 35(1/2), 53 (EBSCO)</p> <p>Edwards, J. S., &amp; Yanqing Duan. (2000). An analysis of expert systems for business decision making at different levels and in different roles. <i>European Journal of Information Systems</i>, 9(1), 36 (ProQuest)</p> <p>Mitchell, D., &amp; Pavour, R. (2002) Using modular neural networks for business decisions. <i>Management Decision</i>, 40(1/2), 58 (ProQuest)</p>	
8	<ul style="list-style-type: none"> <li>Review and audit procedures</li> </ul>	<p>Department of Veterans Affairs. (1999). <i>Audit of Veterans Health Administration decision support system standardization</i>. (Report No. 9R4-A19-075). Washington, DC: Office of Inspector General. <a href="http://www.va.gov/oig/52/reports/1999/9R4-A19-075.pdf">http://www.va.gov/oig/52/reports/1999/9R4-A19-075.pdf</a></p> <p>Power, D. J. (2002). <i>Decision Support Readiness Audit Questionnaire</i>. DSSResources.COM <a href="http://dssresources.com/consultants/decisionsupportreadiness.pdf">http://dssresources.com/consultants/decisionsupportreadiness.pdf</a></p> <ul style="list-style-type: none"> <li>Sanders, R. (1999). <i>Executive Decision Making Process: Identifying Problems &amp; Assessing</i>. Greenwood Publishing Group (Online Resources)</li> </ul> <p>Read Chapters 10 and 11.</p>	

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### **Final Paper**

**This is a Solutions Focused Leadership course and the final Paper should incorporate the following stages: Problem Identification, Research, Solution, Implementation, Evaluation. Guidebook to Follow.**

Select a real company (not a retailer). Identify 6 decisions that the company makes at different levels of the organization. Describe the policies, procedures and decision-making tools that might be used to make each of the six decisions. In each case, explain why the decision-making methodology would be appropriate to this specific company's strategy.

For example, Wal-Mart makes decisions about:

- a) where to locate new stores;
- b) which additional businesses to include in its stores (travel agent, bank, optician, etc.);
- c) specific products to discontinue selling;
- d) who to hire (and fire);
- e) how many cash registers to have open at any given time;
- f) accepting a specific item for customer return (for example, an article of clothing that appears to have been worn).

Who would make these decisions? What criteria would they use? How might the criteria have been established? Would they use any kind of quantitative analysis? If so, which specific quantitative methods might be appropriate? How much discretion would they have? Who would review or evaluate their decisions?

## Grading Criteria

*Grading Scale*

*Grading requirements*

<b>A</b>	100 – 93
<b>A-</b>	92 – 90
<b>B+</b>	89 – 88
<b>B</b>	87 – 83
<b>B-</b>	82 – 80
<b>C+</b>	79 – 78
<b>C</b>	77 – 73
<b>C-</b>	72 – 70
<b>F</b>	69 and below

<i>Attendance/participation</i>	<i>25%</i>
<i>Weekly Assignments</i>	<i>20%</i>
<i>Final paper</i>	<i>35%</i>
<i>Optional</i>	<i>10%</i>
<i>Optional</i>	<i>10%</i>
	<i>100%</i>

## **Library**

*All resources in Argosy University's online collection are available through the Internet. The campus librarian will provide students with links, user IDs, and passwords.*

Library Resources: Argosy University's core online collection features nearly 21,000 full-text journals and 23,000 electronic books and other content covering all academic subject areas including Business & Economics, Career & General Education, Computers, Engineering & Applied Science, Humanities, Science, Medicine & Allied Health, and Social & Behavior Sciences. Many titles are directly accessible through the Online Public Access Catalog at <http://library.argosy.edu>. Detailed descriptions of online resources are located at <http://library.argosy.edu/libweb/resources/>

In addition to online resources, Argosy University's onsite collections contain a wealth of subject-specific research materials searchable in the Online Public Access Catalog. Catalog searching is easily limited to individual campus collections. Alternatively, students can search combined collections of all Argosy University Libraries. Students are encouraged to seek research and reference assistance from campus librarians.

Information Literacy: Argosy University's Information Literacy Tutorial was developed to teach students fundamental and transferable research skills. The tutorial consists of five modules where students learn to select sources appropriate for academic-level research, search periodical indexes and search engines, and evaluate and cite information. In the tutorial, students study concepts and practice them through interactions. At the conclusion of each module, they can test their comprehension and receive immediate feedback. Each module takes less than 20 minutes to complete. Please view the tutorial at <http://library.argosy.edu/infolit/>

## **Academic Policies**

Academic Dishonesty/Plagiarism: In an effort to foster a spirit of honesty and integrity during the learning process, Argosy University requires that the submission of all course assignments represent the original work produced by that student. All sources must be documented through normal scholarly references/citations and all work must be submitted using the *Publication Manual of the American Psychological Association, 5<sup>th</sup> Edition (2001)*. Washington DC: American Psychological Association (APA) format. Please refer to Appendix A in the *Publication Manual of the American Psychological Association, 5<sup>th</sup> Edition* for thesis and paper format. Students are encouraged to purchase this manual (required in some courses) and become familiar with its content as well as consult the Argosy University catalog for further information regarding academic dishonesty and plagiarism.

**Scholarly writing:** The faculty at Argosy University is dedicated to providing a learning environment that supports scholarly and ethical writing, free from academic dishonesty and plagiarism. This includes the proper and appropriate referencing of all sources. You may be asked to submit your course assignments through “Turnitin,” ([www.turnitin.com](http://www.turnitin.com)), an online resource established to help educators develop writing/research skills and detect potential cases of academic dishonesty. Turnitin compares submitted papers to billions of pages of content and provides a comparison report to your instructor. This comparison detects papers that share common information and duplicative language.

### **Americans with Disabilities Act Policy**

It is the policy of Argosy University to make reasonable accommodations for qualified students with disabilities, in accordance with the Americans with Disabilities Act (ADA). If a student with disabilities needs accommodations, the student must notify the Director of Student Services. Procedures for documenting student disability and the development of reasonable accommodations will be provided to the student upon request.

Students will be notified by the Director of Student Services when each request for accommodation is approved or denied in writing via a designated form. To receive accommodation in class, it is the student’s responsibility to present the form (at his or her discretion) to the instructor. In an effort to protect student privacy, the Department of Student Services will not discuss the accommodation needs of any student with instructors. Faculty may not make accommodations for individuals who have not been approved in this manner.

### **The Argosy University Statement Regarding Diversity**

Argosy University prepares students to serve populations with diverse social, ethnic, economic, and educational experiences. Both the academic and training curricula are designed to provide an environment in which students can develop the skills and attitudes essential to working with people from a wide range of backgrounds.