1. DESCRIPTION

**UGER 297 NEW TECHNOLOGIES**.- Deepens the way Information Systems (IS) answer business strategies and how emerging technologies provide solutions to managerial work, as well as new ways of doing business creating competitive advantage, differentiation and breaking paradigms in today’s organizations.

2. JUSTIFICATION

Enormous changes have taken place in the power and use of new technologies in both, our professional and in our personal lives. Nowadays, new technologies have an impact on the design, function, strategy and the competitiveness of all organizations. No longer simply tools to support "back-office" transactions, new technologies are a strategic part of many businesses, enabling the redefinition of markets and industries and the strategies of firms competing between them. Organizations today have access to a huge variety of technologies to support processing, storing, and communicating information to all stakeholders. In this course, we will examine how managers can achieve the maximum potential from new technologies, now and in the future.

3. OBJECTIVES

3.1. GENERAL

- To understand how the organization's strategies and new technologies must be synchronized in order to attain and sustain competitive advantage.

3.2. SPECIFIC

- To understand the necessity of alignment between strategy, organization and systems.
- To understand how technological change has and will continue to affect the management of the organization.
- To understand how technologic initiatives may be utilized to obtain and maintain strategic advantage.
- To understand important components of technology infrastructure.
- To understand e-business and how it affects organizations and management.
- To understand modern transaction, customer management, and supply chain technologies.
- To understand the management of systems implementation projects.
- To understand the basic theory underlying knowledge management initiatives.
• To understand ethical issues relating to new technologies.

4. COMPETENCIES
• To differentiate correctly the types of new technologies used at different hierarchical levels within the organization.
• To compare the choices that exist for developing new technologies to support organization enhancement initiatives.
• To examine different approaches for implementing technological and structural changes that occurs as a result of redesign of business processes and new strategic initiatives.
• To examine the roles of new technologies from the perspectives of the internal and the external environment of the firm.
• To discuss about the ethical implications of new technologies including security issues as well as modern paradigms for the management of these technologies.
## 5. COURSE CONTENT OUTLINE

<table>
<thead>
<tr>
<th>DATE</th>
<th>Specific Competencies</th>
<th>Content</th>
<th>Homework/Projects/Assignments (Non Contact Hours)</th>
<th>Assessment (performance indicators)</th>
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<table>
<thead>
<tr>
<th>Date</th>
<th>Topic</th>
<th>Reading Material</th>
<th>Class Discussion</th>
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<tbody>
<tr>
<td>Sep 6</td>
<td>The student recognizes how to evaluate hardware so that he can harness it to improve managerial processes.</td>
<td>Chapter 4: Information Technology in Business: Hardware 4.1. Basic Functions of Computers. 4.2. A peek inside the computer. 4.3. Peripherals.</td>
<td>Class Discussion. Evaluates components to be considered when acquiring hardware to improve processes.</td>
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<tr>
<td>Sep 7</td>
<td>The student recognizes why managers must keep abreast of software developments in order to guarantee that their needs will be covered and considered.</td>
<td>Chapter 5: Information Technology in Business: Software 5.1. Programs. 5.2. Programming Languages 5.3. Application, Packaged and System Software</td>
<td>Class Discussion. Justifies the best option for software acquisition.</td>
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<tr>
<td>Sep 13</td>
<td>The student differentiates how the Web facilitates electronic commerce in a secure way.</td>
<td>Chapter 7: The Internet, Intranets, and Extranets 7.1. Internet 7.2. Intranets and Extranets</td>
<td>Class Discussion. Measures the scope of action between Internet, Intranet and Extranets.</td>
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<tr>
<td>Date</td>
<td>Topic</td>
<td>Readings</td>
<td>Notes</td>
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<td>Sep 15</td>
<td>The student identifies the ways knowledge is managed in organizations in order to support decision making.</td>
<td>Chapter 8: Data and Knowledge Management 8.1. Managing Digital Data 8.2. Database Models</td>
<td>Class Discussion. Assesses and issues a judgment statement through case analysis.</td>
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<tr>
<td>Sep 16</td>
<td>8.3. Components of Database Management Systems 8.4. Database Architecture</td>
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<tr>
<td>Sep 20</td>
<td>Case Analysis Presentations</td>
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<td>Sep 21</td>
<td>Midterm Exam</td>
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<tr>
<td>Sep 22</td>
<td>The student describes the characteristics of information needed by different managerial levels in order to support decision-making.</td>
<td>Chapter 9: Data and Knowledge Management 9.1. The Organizational Pyramid 9.2. Characteristics of Information at Different Managerial Levels</td>
<td>Class Discussion. Classifies the characteristics of information needed by different managerial levels.</td>
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<tr>
<td>Date</td>
<td>Topics</td>
<td>Text</td>
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| Sep 23 | 9.3. The Nature of Managerial Work  
9.4. Organizational Structure  
| Sep 27 | 9.6. Managers and their IS’s  
| Sep 28 | The student identifies the importance of collaboration between IS managers and line managers, and understand the relationships between the two groups in order to guarantee that their needs will be covered and considered. | Chapter 10: Organizing Information Systems and Services  
10.1. Information Systems Architecture and Management  
10.2. Organizing the IS Staff  
Class Discussion.  
Demonstrates the importance of collaboration between IS managers and line managers. |
| Sep 29 | 10.3. Challenges for IS Managers and Line Managers  
10.4. Information Centers  
10.5. Chargeback Methods  
10.6. Careers in Information Systems |  
| Sep 30 | The student recognizes the legal, cultural, and other challenges to implementing informational exchange systems in order to improve processes efficiency. | Chapter 11: Inter-Organizational and International Information Systems  
11.1. Sharing Information Systems  
11.2. Electronic Data Interchange  
Class Discussion.  
Diagrams EDI cycle. |
| Oct 4 | 11.3. International and Multinational Organizations  
11.4. Using the Web for International Commerce  
11.5. Challenges to Global Information Systems |
| Oct 5 | The student describes the steps followed in decision-making.  
Chapter 12: Decision Support, Executive, and Geographic Information Systems  
12.1. The Decision Making Process  
12.2. Structured and Unstructured Problems  
12.3. Decision Support Systems Components  
12.4. Types of DSS  
12.5. Executive and Geographical IS's  
Class Discussion.  
Demonstrates the importance of collaboration between IS managers and line managers.  
Abstract for E-business model. |
| Oct 6 | The student identifies the different components of the specification requirements and its construction.  
Chapter 13: Data Flow Diagrams  
13.1. Diagram Flows  
13.2. Data Dictionary  
Class Exercises. |
| Oct 7 | The student describes different approaches to business planning in general and IS planning in particular.  
Chapter 14: Planning Information Systems  
14.1 Definitions  
14.2 Approaches  
Class Discussion. |
| Oct 11 | The student describes the system development life cycle.  
Chapter 15: Systems Development  
15.1 The Systems Development Life Cycle  
Class Discussion. |
|--------|-------------------------|-----------------------------------------------------------------------------------------------------------------|  |
|        | Class Discussion. Assesses and issues a judgment statement for a given example in class for systems acquisition approach. |  |
|        | Class Discussion. Evaluates the security measures that to be considered when developing a system. Overview for final exam content. |  |
| Oct 18 - 19 | E-BZZ Model Presentation |  |
| Oct 20 | FINAL EXAM |  |
6. METHODOLOGY

- Class periods are a combination of informal presentations by the instructor and by instructor led student discussions.
- The instructor’s presentations are designed to correspond with the material in the course textbook, secondary textbook and supplement material.
- **ALL of the course material can be found in Blackboard (including tips and guidelines), which is a mandatory tool for our class.**
- There will be discussions forums that count as part of participation points. The quality of your comments and not the quantity is the main factor for earning these points.
- There will be research projects where you will work in teams: emergent technologies, case studies and e-business model proposal.
- Students need to complete 4 quizzes that will last no more than 25 minutes.
- Quizzes, Midterm and Final Exams will be in electronic format on blackboard.

**IMPORTANT NOTE:**

- It is important that you prepare before class to be able to participate effectively. We encourage you to enrich the discussions with real life examples of the topics under study.
- This course follows ICP attendance policy. 6 absences are permitted but **no exceptions will be considered** after completing this amount. 3 delays are equivalent to 1 absence.
- **THE USE OF CELL PHONES IS NOT ALLOWED** (participation points will be subtracted if this policy is not followed by the students).
- Students absent from class will not be given the chance to repeat or makeup missed work.
- Students attending class are responsible for reading all materials assigned for that particular class period before the beginning of the class in which the materials will be discussed.
- Every written work has to be submitted with a presentation sheet, it must be written in Arial font 12 at 1.5 spaces. Every work needs to be in justified format. **All sources need to be included in the last page as bibliography and webliography. Points will be subtracted if the students do not follow this policy.**
- Students are expected to adhere to the highest standards of integrity. Honesty in academic matters is part of this obligation. Any act or omission by a student that violates this concept of academic integrity shall be defined as academic misconduct and shall be subject to the procedures and penalties set forth herein. The term "academic misconduct" is academic dishonesty and shall include the following acts and/or omissions: cheating, plagiarism, misrepresentation by lying to a member of the faculty, staff or administration to increase one's grade, misuse of computer services, bribery, conspiracy and falsification of records.
- **The students that don’t hand out the homework on time will be allowed to give it on another day but it will be graded over 70.**

7. EVALUATION

7.1. Assessment Criteria

- Coherent expositions related to how new technologies can give businesses competitive advantage to maintain leadership in markets.
- Analysis and interpretation of the different functions inside businesses to identify the roll that new technologies play in these functions.
• Analysis and interpretation of the way that hardware, software and network telecommunications need to be evaluated to improve managerial work.
• Coherent expositions related to how Web technologies contribute to e-Commerce in a secure way.
• Coherent expositions related to how knowledge is managed and used for decision-making.
• Systematization of the characteristics of information that is needed at different managerial levels to support decision-making.
• Coherent expositions related to how the collaboration between IT managers and line managers is important in order to guarantee that all needs and expectations will be covered and established.
• Coherent expositions related to the legal and cultural challenges that exist while integrating systems in order to improve processes and achieve efficiency.
• Implementation of the processes necessary to decision-making.
• Coherent expositions related to the approach of planning businesses in general and new technologies in particular.
• Analysis and interpretation of the appropriate method for software acquisition depending on the circumstances.
• Coherent expositions related to the importance of integrating security measures while developing new systems, as well as how organizations need to develop disaster recovery plans.

7.2. Performance Markers
• Diagrams the cycle to generate information from data input.
• Critiques and analyze barriers to achieve competitive advantage.
• Debates The Productivity Paradox Discussion Forum.
• Evaluates components to be considered when acquiring hardware to improve processes.
• Justifies the best option for software acquisition.
• Introduces an emergent technology not yet in market.
• Demonstrates advantage and disadvantages of network topologies.
• Measures the scope of action between Internet, Intranet and Extranets.
• Assesses and issue a judgment statement through case analysis.
• Classifies the characteristics of information needed by different managerial levels.
• Demonstrates the importance of collaboration between IT managers and line managers.
• Diagrams EDI cycle.
• Assesses and issue a judgment statement for a given example in class for systems acquisition approach.
• Evaluates the security measures that to be considered when developing and implementing new systems and technologies.

7.3. Weighting

<table>
<thead>
<tr>
<th>Question</th>
<th>Points</th>
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<tr>
<td>1. Quiz #1</td>
<td>15 pts.</td>
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<td>2. Quiz #2</td>
<td>15 pts. 100 pts.</td>
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<tr>
<td>3. Emergent Technologies</td>
<td>20 pts. Midterm</td>
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</table>
5. Discussion forums and Class Participation 25 pts.

6. Quiz #3 15 pts.
7. Quiz #4 15 pts. 100 pts.
8. E-Business Model 45 pts. Final

10. Midterm Exam 100 pts.
11. Final Exam 100 pts.

8. BIBLIOGRAPHY

8.1. REQUIRED

8.2. COMPLEMENTARY

8.3. HANDOUTS
- All course material can be found in Blackboard, including tips and guidelines.

8.4. WEBLIOGRAPHY and DATABASES
- EBSCO Database
- Wiley Database
- Microsoft Case Studies
- Articles from Informationweek Magazine
- SAP Case Studies
- Oracle Case Studies
  Articles from PCWorld Magazine

IMPORTANT NOTE:
The use of the Internet for research is completely allowed. However, no plagiarism is permitted. It is mandatory to include every Internet reference that has been used for this class.
### 9. FACULTY INFORMATION

<table>
<thead>
<tr>
<th>NAME: Franklin Arosemena G.</th>
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<tbody>
<tr>
<td><strong>ACADEMIC CREDENTIALS:</strong></td>
</tr>
<tr>
<td>* <strong>UNDERGRAD:</strong> Electronic Systems Engineer (ITESM, Mexico)</td>
</tr>
<tr>
<td>* <strong>GRADUATE:</strong> Master in Business Administration (FIU)</td>
</tr>
<tr>
<td>* <strong>CERTIFICATIONS &amp; SEMINARS:</strong></td>
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<tr>
<td>- Microsoft Certified Systems Engineer</td>
</tr>
<tr>
<td>- Tivoli IT Director Certified</td>
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<tr>
<td>- Strategic Management of IT (Berkeley University, California)</td>
</tr>
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<td>- ITIL Foundations Certified</td>
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</tr>
</tbody>
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### 10. FACULTY SIGNATURE AND/OR DEAN/DIRECTOR’S APPROVAL

<table>
<thead>
<tr>
<th>Prepared by: Franklin Arosemena</th>
<th>Date: August 13, 2010</th>
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<tr>
<td>Reviewed by: Dean Monica Reynoso</td>
<td>Date: August 13, 2010</td>
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