



**UNIVERSIDAD DE GUADALAJARA**

**CENTRO UNIVERSITARIO DE  
CIENCIAS ECONÓMICO ADMINISTRATIVAS  
MASTER OF BUSINESS ADMINISTRATION**

1.- NAME OF THE SUBJECT

Information systems applied to the  
administration

2.- KEY OF MATTER

optional open

3.- PREREQUISITES

None

4.- SERIALIZATION

None

5.- TRAINING AREA

Optional Open

6.- DEPARTMENT

Information systems

7.- ACADEMY

Software Engineering

8.- TYPE OF COURSE

Classroom

9.- TYPE OF SUBJECT

Course

10.- WORKLOAD

HBCA	HAI	TOTAL
48	48	96.

11.- CREDITS

6

12.- EDUCATION LEVEL

Graduate/Mastery

### **13.- PRESENTATION**

The Maestrante in Business Administration, you must know the systems management decision making, called in its latest generation Business Intelligence (BI) and enterprise software in business, as Enterprise Resource Planning (ERP), Management supply chain (SCM), Management of Customer Relations (CRM) and business intelligence (or Business Intelligence) and analytics (Business Analytys) intelligence.

For effective decision making should have a base where the data is saved, the handlers Databases (DMS) systems and their central repository for all departments and historical information call Data Warehouse (Data Warehouse), and if it's just a market department Data (Data Mart) that serves to Information Management (Information Management) and Knowledge Management (KM), where we can use tools knowledge discovery and data mining (Knowledge Discovery and Data Mining, KDD) and analytical tools in business (Business Analytys)

Data mining allows us to find relationships between data that did not even know (for example: Wall-mart found that when diapers were sold, beer was sold, put together and sold over) through data analysis software that uses statistical techniques and artificial intelligence.

With this course the future Master in Business Administration may turn information into knowledge and knowledge into profits.

### **14.- TRAINING STUDENT PROFILE**

Student with an ability to handle new software, knowledge of English, analytical skills, innovation in the use of current technology in business.

A) **conocimentos:** Differentiate the concepts of Business Intelligence, ERP, SCM, CRM, database, data warehouse, data mart, Knowledge Discovery, Data Mining and Business Analytys.

B) **SKILLS:** Understand that technology is necessary for marketing and database software to meet specialized BI, Business Analytys, ERP, SCM, CRM, Data Warehouse, Data Mining and different manufacturers.

C) **Attitudes:** better management of information and digital competence, assessment of teamwork, enhance the autonomy, personal initiative and learning to learn.

D) **SECURITIES:** punctuality, responsibility, communication, constructive criticism, will, friendship, optimism and empathy improvement: During the following values will be promoted

### **15.- PROGRAM OBJECTIVES**

Objective: Based on the objective of making management decisions different technologies and software offerings for business focused on managing information through databases for business intelligence, enterprise resource planning (ERP), administration supply chain (SCM), the management of customer relationships, data warehousing, data mining and analytical tools Business Analytys.

Specific objectives:

1. Understand the different categories of software applied to marketing especially in business intelligence, CRM, ERP, SCM
2. Know and understand the information technologies applied to marketing particularly those related to the design and use of a data warehouse or a data mart (data mart)
3. Analyze the data discovery technologies and knowledge as Data Mining and its application to business.
4. Design a plan of implementation of business intelligence technologies for today's employer or write a test case analysis of the use of ERP, SCM, CRM, BI, data warehousing, data mining in a Mexican company

## 16.- THEMATIC CONTENT

- 1) business intelligence (BI BUSINESS INTELLIGENCE O)
  - a) decision support systems
  - b) Business Intelligence (BI)
  - c) Analytical Intelligence (Business Analytics)
  - d) Classification of business software Software
  - e) The software as a service and cloud computing (Cloud computing)
  - f) Enterprise Resource Planning (ERP)
  - g) supply chain management (SCM)
  - h) Managing customer relationships (CRM)
  - i) Knowledge Management (KM)
  - j) Data Warehouse (Data Warehouse), big data governance k) Knowledge Discovery and Data Mining (Data Mining)
  
- 2) BI TECHNOLOGIES, data warehouses, data mining
  - a) Hardware and Telecommunications
  - b) Architecture for the data warehouse
  - c) Data Storage Technology
  - d) Systems handlers database (OLTP) and metadata e) Base multidimensional data (OLAP)
    - a) The process of a data warehouse
    - b) What it is Data Mining and why do it?
    - c) Data Mining Applications in business d) The process of data mining
    - e) artificial intelligence for knowledge discovery: neural networks, genetic algorithms etc.
  
- 3) BI tool vendors and CASE STUDY
  - a) Free BI Software
  - b) Application of cloud computing (cloud computing)
  - c) Applications for mobile devices (smartphones, touch tablets)
  - d) Database
  - e) Enterprise Resource Planning (ERP)
  - f) supply chain management (SCM)
  - g) Managing customer relationships (CRM)
  - h) Software BI (Business Intelligence), Intelligence Analytics (Business Analytics) and Performance Management (Business Performance Management)
  - i) Software for Storage and data extraction, transformation and loading of data (ETL)

j) Software for Data Mining k) Analysis of Case Studies

#### 4) IMPLEMENTING BUSINESS INTELLIGENCE (BI)

a) Basic Guide to Business Intelligence

i) How to identify opportunities in BI?

ii) Implementing a BI solution

b) Develop an implementation plan Business Intelligence for the current company where he works with

i) A list of expected benefits and implementation objectives including success stories of similar companies.

ii) a proposed commercial value of the data warehouse (return on investment, budget)

iii) List of computer equipment and specialized software for different categories through a process with weighted to the choice of criteria and the computer software

iv) Proposed implementation: Bidding internal implementation, or consulting firms, training, support.

c) Option Two: thoughtful documentation implementing BI technologies in the company in which they work, in your particular case explaining the cycle of BI: Analysis, Idea, Action and Measurement.

d) Option Three: write a test case analysis of the use of BI, CRM, data warehousing, data mining in the Mexican company of a size and sector specific location

### 17.- REFERENCES

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**Cindi Howson. 2009. Business intelligence: estrategias para una implementación exitosa. McGraw Hill, 2009. ISBN9701067592, 9789701067598. 658.47 HOW 2009 (3 ejemplares)**

**Davenport, Thomas H. y Harris, Jeanne G. 2009. Competing in Analytics (En español de la Harvard Business School Press) Ed. Alfaomega ISBN 978-607-7686-31-6.**

**Méndez del Río, Luis. 2006. Más allá del business intelligence : 16 experiencias de éxito. Barcelona : Gestión 2000 : Planeta DeAgostini. 658.403 MEN 2006 (3)**

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**Turban, Efraim. (2008). Information technology for management : transforming organizations in the digital economy . Hoboken, NJ : J. Wiley & Sons. ISBN 9780471787129. 658.514 INF 2008**

**Te'eni, Dov (2007). Human computer interaction : developing effective organizational information systems. Hoboken, N.J. : John Wiley & Sons, Inc. ISBN 0471677655. 004.019 TEE 2007**

**Sieber, Sandra (2006). Los sistemas de información en la empresa actual: aspectos estratégicos y alternativas tácticas. Madrid: McGraw-Hill. ISBN 8448140060 9788448140069. 025.04 SIE 2006**

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Liataud, Bernard; Hammond, Mark. McGraw-Hill Professional. 2000. eBook.  
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334p.

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Sons. 658.802 BER

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Communications of the

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Diagrams; DOI:

10.1145/1978542.1978562

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Emotional Intelligence, IT- business Strategic Alignment, Motivation, and  
Communication Effectiveness. Full Text Available By: Jorfi, Hassan; Jorfi,  
Saeid; Yaccob, Hashim Fauzy Bin; Shah, Ishak Mad. International Journal of  
Business & Management, Sep2011, Vol. 6 Issue 9, p30-37, 8p, 1  
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Resource Planning and Business Intelligence Methods Influence on  
Manager's Decision: A Case Study. Full Text Available By: Edelhauser,  
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11 Charts, 5 Graphs

**COMBINING BUSINESS INTELLIGENCE WITH CLOUD COMPUTING TO DELIVERY AGILITY IN ACTUAL ECONOMY.** Full Text Available By: Mircea, Marinela; Ghilic, Bogdan; Stoica, Marian. *Economic Computation & Economic Cybernetics Studies & Research*, Jan2011, Vol. 45 Issue 1, p1-16, 16p, 1 Color Photograph, 8 Diagrams, 2 Charts

**CONCEPTUAL MODEL OF BUSINESS VALUE OF BUSINESS INTELLIGENCE SYSTEMS.** Full Text Available / **KONCEPTUALNI MODEL POSLOVNE VRIJEDNOSTI SUSTAVA POSLOVNE INTELIGENCIJE.** By: Popovic, Aleš; Turk, Tomaž; Jaklic, Jurij. *Management: Journal of Contemporary Management Issues*, Jun2010, Vol. 15 Issue 1, p5-29, 25p, 4 Diagrams, 3 Charts

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## **RECURSOS EN ESPAÑOL**

**Inteligencia de negocios, almacén de datos desde Monterrey, México  
(Twitter: @\_gravitar)**

**<http://www.gravitar.biz/index.php/blog>**

**Fuente RSS <http://feeds2.feedburner.com/gravitar> para Google Reader**

**Inteligencia de Negocios en Español**

**<http://www.bi-la.com/>**

**Grupo en LinkedIn México y Latinoamérica , hay otro grupo Business Intelligence España**

**<http://www.linkedin.com/groups?gid=1838158>**

**<http://www.linkedin.com/groups?gid=721047>**

**Blog de Reflexiones sobre las tecnologías de la información de Josep Curto Díaz**

**<http://informationmanagement.wordpress.com/>**

**Business intelligence Fácil , Vídeo introducción al Business Intelligence**

**<http://www.businessintelligence.info/definiciones/introduccion-al-business-intelligence.html>**

**El portal en Español sobre BI, Software analítico, reporting, balanced scorecard, cuadro de mando, data warehouse**

**<http://www.bi-spain.com/>**

**Dataprix, BI, CRM, gestión de conocimiento, base de datos, analítica , data mining**

**<http://www.dataprix.com/blogs/carlos/libro-introduccion-business-intelligence-jordi-conesa-josep-curto>**

**Revista española de inteligencia de negocios**

**<http://www.bi-magazine.com/>**

**Blog de Tecnologías de la Información y Estrategia. Sigánlo en Twitter**

**@anibalgoicochea Business Intelligence Consultant & Blogger. Specialist in**

**BusinessObjects, MicroStrategy & SAP BPC <http://anibalgoicochea.com/>**

**Revista CIO sección de Aplicaciones en especial BI, CRM y KM**  
<http://www.cio.com/topic/3000/Applications>

**Blog sobre SQL server y BI de Microsoft**  
<http://www.sqlserversi.com/>

**Informationweek México**  
<http://www.informationweek.com.mx/home/>

**Infonomia, empresa de servicios profesionales de innovación**  
<http://www.infonomia.com/>

**Hacia la gestión del conocimiento con recursos web**  
[http://www.uoc.edu/web/esp/art/uoc/canals/canals\\_imp.html](http://www.uoc.edu/web/esp/art/uoc/canals/canals_imp.html)

**Dialogo TI, cursos de Tecnología aplicado a los negocios. En especial los cursos de: Business Intelligence, Storage**  
<http://www.dialogoti.com/mx/home.aspx>

**Academia Virtual de Microsoft: Cursos en línea sobre sus productos. En especial SQL server 2008 R2, SQL azure (base de datos en la nube)**

<http://www.microsoftvirtualacademy.com/Home.aspx>

**ARTÍCULOS DE GOOGLE ACADÉMICO SOBRE BUSINESS INTELLIGENCE EN ESPAÑOL:**  
[http://scholar.google.com.mx/scholar?hl=es&q=Business+Intelligence&btnG=Buscar&lr=lang\\_es&as\\_ylo=&as\\_vis=0](http://scholar.google.com.mx/scholar?hl=es&q=Business+Intelligence&btnG=Buscar&lr=lang_es&as_ylo=&as_vis=0)

**ENGLISH RESOURCES:**

**Training for careers in Analytics . Revisar 10 most popular analytic tools in business**  
<http://blog.jigsawacademy.in/>

**Advanced Business Analytics, Data Mining and Predictive Modeling  
LinkedIn group:**  
[http://www.linkedin.com/groups?home=&gid=35222&trk=anet\\_ug\\_hm](http://www.linkedin.com/groups?home=&gid=35222&trk=anet_ug_hm)

**Information Management, How your business work antes DMreview**  
<http://www.information-management.com/>

**The Data Warehouse Institute**  
<http://tdwi.org/>

**Customer Think (CRM y más)**  
<http://www.customerthink.com/technology>

**Revista de la compañía especializada en data warehousing y business analytics, Teradata**  
<http://www.teradatamagazine.com/>

**The knowledge Exchange, interesante también la sección Business Analytics**  
<http://www.sas.com/knowledge-exchange/customer-intelligence/>

**Tutorial de Business Analytics and Optimization (patrocinado por IBM cognos)**  
<http://www.internetevolution.com/tutorial-business-analytics-optimization.asp>

**Analytics Clan House**  
<http://www.internetevolution.com/analytics-clan.asp>

**Informationweek sección Business intelligence**  
<http://www.informationweek.com/software/bi>  
[http://www.informationweek.com/software/info\\_management](http://www.informationweek.com/software/info_management)

**Tech web noticias sobre Management Tech News**

<http://www.techweb.com/wire/e-business/>

**Data Management Internacional**

<http://www.dama.org/>

Direct market Association  
<http://www.the-dma.org/index.php>

#### **FABRICANTES DE SOFTWARE:**

**SAS el poder para conocer. Categorías de interés: Business Intelligence, Customer Intelligence, Business Analytics, Data Management, Analytics (Predictive Analytics and Data Mining) <http://www.sas.com/software/>**

**Business Analytics: IBM Cognos**  
<http://www-01.ibm.com/software/data/business-analytics-optimization/?lnk=ftkt>

**IBM: Information Management (Database software, Data Warehousing & Analytics, Master Data Management)**  
[http://www-01.ibm.com/software/data/?pgel=ibmhzn&cm\\_re=masthead--products--sw-infomgmt](http://www-01.ibm.com/software/data/?pgel=ibmhzn&cm_re=masthead--products--sw-infomgmt)

**Oracle (CRM on Demand, Siebel, peoplesoft enterprise CRM, hyperion. 11g database, data warehousing, big data, Business intelligence)**  
<http://www.oracle.com/index.html>

**SAP México: Gestión de relaciones con los clientes y Business Intelligence**  
<http://www.sap.com/mexico/solutions/index.epx>

**Microsoft Dynamics CRM**  
<http://www.microsoft.com/latam/dynamics/crm/default.aspx>

**Microsoft Dynamics GP. Información empresarial de la información a la acción con eficaces herramientas de análisis y de generación de informes**  
<http://www.microsoft.com/dynamics/es/xl/products/gp-business-insight.aspx>

**Microsoft Dynamics AX (administración de base de datos); SQL server 2008 inteligencia Empresarial**

<http://www.microsoft.com/dynamics/es/xl/products/ax-business-insight.aspx>

**Information Builders México** <http://www.informationbuilders.com.mx/>

#### **18.- PROFESSIONAL APPLICATION**

Understanding the specialized software (BI, ERP, SCM, CRM, data warehouse, data mining), Making a plan for implementing Business Intelligence in the company where they work or analysis of cases of Mexican companies using these technologies and systems information. Analytics career in Business Analyst, Senior Analyst, lead analyst, manager in that specialty

#### **19.- PROFESSORS TEACHING MATTER**

Mtro. Salvador Barrera Rodríguez

#### **20.- TEACHER PROFILE**

Master in Management, Founder Professor of the subject Management Information Systems in 1999, specializing in technology applied to business in general and marketing in particular as they are electronic business, technology certifications (IBM DB2 and Microsoft Excel 2007), knowledge . in enterprise software, participated as a speaker at the 8th International Conference on OLAP Business Tools: Analysis of Business data, he taught a course of MBA with emphasis in Information Systems data Warehouse (Data Warehouse) in main Ecuador.ponente in marketing congress in Honduras with the issues of data mining and CRM. More details <http://sachavir.webcindario.com/curriculum.htm>

#### **21.- TEACHING LEARNING PROCESS**

Previous reading, case studies, discussion of topics, practical laboratory or portable computer, Internet (online courses, web 2.0 tools), research, Exhibition teacher, student participation, teamwork, presentations

#### **22.- EXTRACURRICULAR ACTIVITIES**

Among the extracurricular activities that deal with this subject are the following: a) Attendance at conferences and congresses on the subject organized in CUCEA and beyond  
b) Reading date in another language, especially in English c) Software demonstrations by leading companies related articles and literatu

#### **23.- FORMULATION, APPROVAL AND VALIDATION**

Formulation: MSc. Salvador Barrera Rodriguez

Approval: Software Engineering Academy and the Academic Board of the Master Marketing Management

Validation: Departmental School

**24.- EVALUATION OF LEARNING**

After reading through  
concept maps and  
attendance 30%  
Tasks, Cases and  
participation 35%  
Individual Final Project  
(BI implementation plan,  
test case analysis) 35%

**25.- CURRICULAR EVALUATION****26.- CURRICULUM MAP****27.- PARTICIPANTS AND DATE OF PROCESSING PROGRAM**

Mtro. Salvador Barrera Rodríguez. 2015