



SACRAMENTO
STATE

Course Change Proposal Form A



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| Academic Group (College): Business Administration | Academic Organization (Department): Management Information Systems | Date: 3/27/2007 |
| Type of Course Proposal: New <input checked="" type="checkbox"/> Change <input type="checkbox"/> Deletion <input type="checkbox"/> | Department Chair: Monica Lam | Submitted by: Monica Lam |
| Does this course fulfill a requirement for single-subject or multiple subject credential students? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> | For Catalog Copy: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> CCE: Yes <input type="checkbox"/> No <input type="checkbox"/> | Semester Effective: Fall <input type="checkbox"/> Spring <input checked="" type="checkbox"/> , 2008 <input type="checkbox"/> |

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|---|--|
| This course replaces experimental course Subject Area (prefix) and Catalog Number (course number): | |
| This Catalog Number (course number) is being replaced: | |

Change from:

| | | |
|--|---------------|---------------|
| Subject Area (prefix) & Catalog No. (course no.): | Title: | Units: |
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Change to:

| | | |
|--|---------------|---------------|
| Subject Area (prefix) & Catalog No. (course no.): | Title: | Units: |
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JUSTIFICATION:

NEW COURSE DESCRIPTION: (Not to exceed 80 words, and language should conform to catalog copy. See <http://www.csus.edu/acaf/univmanual/crspsl.htm> - Guidelines for Catalog Course Description)

MIS 183. Business Intelligence Applications. Advanced information technologies that extract non-trivial, actionable, and novel knowledge from data to achieve strategic goals of organizations. Emphasis on multidimensional data modeling, online analytic processing, data warehouse, and data mining. Prerequisite: MIS 150 or MIS 151. 3 units.

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| Note: | |
| Prerequisite: MIS 150 or MIS 151 | |
| Corequisite: | |
| CAN (California Articulation Number): | |
| Graded: Letter <input checked="" type="checkbox"/> Credit/No Credit <input type="checkbox"/> | Instructor Approval Required? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> |
| Course Classification (e.g., lecture, lab, seminar, discussion): lecture | Title for SIS+/CMS (not more than 30 characters) MIS 183. Business Intelligence Applications. |
| Cross Listed? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> | If yes, do they meet together and fulfill the same requirement, and what is the other course. |
| How Many Times Can This Course be Taken for Credit? <u>1</u> | |
| Can the course be taken for Credit more than once during the same term? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> | |

FOR NEW COURSE PROPOSALS OR SUBSTANTIVE CHANGES ONLY:

Description of the Expected Learning Outcomes: Describe outcomes using the following format: "Students will be able to: 1), 2), etc." See the example at <http://www.csus.edu/acaf/example.htm>

Students will be able to:

- (1) Understand the concepts and principles of developing a multidimensional data models.
- (2) Understand ROLAP, MOLAP, and HOLAP data environments and their pros and cons.
- (3) Understand and apply the data warehouse development life cycle.
- (4) Understand and apply different phases of data mining process.
- (5) Apply data mining software to generate business intelligence.


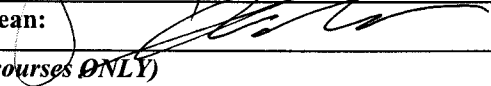
****Attach a list of the required/recommended course readings and activities [Note: it is understood that these are updated and modified as needed by the instructor(s).] This attachment should be forwarded only to your Dean's office, not Academic Affairs.**

Assessment Strategies: A description of the assessment strategies (e.g., portfolios, examinations, performances, pre-and post-tests, conferences with students, student papers) which will be used by the instructor to determine the extent to which students have achieved the learning outcomes noted above:

Individual assignments, team projects, quizzes, and exams.

For whom is this course being developed?
 Majors in the Dept Majors of other Depts ___ Minors in the Dept ___ General Education ___ Other ___
 Is this course required in a degree program (major, minor, graduate degree, certificate)? Yes ___ No
 If yes, identify program(s):
 Does the proposed change or addition cause a significant increase in the use of College or University resources (lab room, computer facilities, faculty, etc.)? Yes ___ No
 If yes, attach a description of resources needed and verify that resources are available.
 Indicate which department or programs will be affected by the proposed course (if any). MIS area in the College of Business Administration
The Department Chair's signature below indicates that affected programs have been sent a copy of this proposal form.

Approvals: If proposed change, new course or deletion is approved, sign and date below. If not approved, forward without signing to the next reviewing authority, and attach an explanatory memorandum to the original copy.

| Signatures: | Date |
|---|--------|
| Department Chair:  | 3-3-08 |
| College Dean or Associate Dean:  | |
| CPSP (for school personnel courses ONLY) | |
| Associate Vice President and Dean for Academic Programs | |

Distribution: Academic Affairs (original), Department Chair and College Dean. Dean's office to send original after approval to Academic Affairs, at mail zip 6016. An electronic copy must also be sent.

CALIFORNIA STATE UNIVERSITY, SACRAMENTO
College of Business Administration

MIS 183 – Business Intelligence Applications

COURSE OUTLINE

INSTRUCTOR:

OFFICE:

OFFICE HOURS:

CONTACT:

TEXTBOOKS

Efraim Turban, Jay E. Aronson, Ting-Peng Liang, Ramesh Sharda, Decision Support and Business Intelligence Systems. Pearson/Prentice Hall, 2007

Zhao Hui Tang, Jamie MacLennan, Data Mining with SQL Server 2005. Wiley, 2005.

Ralph Kimball, Margy Ross, The Data Warehouse Toolkit. Wiley, 2002.

COURSE DESCRIPTION

Advanced information technologies that extract non-trivial, actionable, and novel knowledge from data to achieve strategic goals of organizations. Emphasis on multidimensional data modeling, online analytic processing, data warehouse, and data mining. Prerequisite: MIS 150 or MIS 151.

COURSE OBJECTIVES

- (1) Understand the concepts and principles of developing a multidimensional data models.
- (2) Understand ROLAP, MOLAP, and HOLAP data environments and their pros and cons.
- (3) Understand and apply the data warehouse development life cycle.
- (4) Understand and apply different phases of data mining process.
- (5) Apply data mining software to generate business intelligence.

COURSE EVALUATION

| | |
|---------------------------|-----|
| Exam 1 | 20% |
| Exam 2 | 20% |
| Exam 3 | 20% |
| Quizzes and Participation | 20% |
| Homework Assignments | 20% |

DETAILED LEARNING OBJECTIVES

1. Multidimensional Data Models

- Understand the difference between a relational data model and multidimensional data model.
- Learn the basic techniques to develop a multidimensional data model including how to identify dimensions, characteristics, and hierarchies.
- Differentiate among star schema, snowflake schema, and multi-star schema.
- Learn how to select the best schema to satisfy business users' needs.

2. Data Warehouse

- Understand the purposes of a data warehouse.
- Plan for and justify a data warehouse.
- Identify data requirements, architecture, and infrastructure of a data warehouse.
- Develop a logical data model for a data warehouse.
- Develop a physical data model for a data warehouse.

3. Data Mining

- Understand the purposes of data mining.
- Understand the data mining process including objective identification, model selection, hypothesis formulation, target data collection, data preprocess, model fitting, testing/verification, interpretation/evaluation, and application.
- Learn about values of data mining from real-life data mining applications.
- Learn about decision trees and neural networks as two major data mining algorithms.
- Understand the importance of text mining.

4. SQL server 2005

- Use SQL Server 2005 to illustrate relevant concepts in section 1, 2, and 3.