PAC FORM #2

UNIVERSITY COLLEGE of the FRASER VALLEY

COURSE IMPLEMENTATION DATE: []
COURSE REVISED IMPLEMENTATION DATE: [January 2004]
COURSE TO BE REVIEWED: [Nov 2007]
(Four years after implementation date)

OFFICIAL COURSE OUTLINE INFORMATION

Students are advised to keep course outlines in personal files for future use.
Shaded headings are subject to change at the discretion of the department and the material will vary - see course syllabus available from instructor

FACULTY/DEPARTMENT: **Computer Information Systems**

CIS 430 — FORMER COURSE NUMBER — **3** UCFV CREDITS

Advanced Database Topics
COURSE DESCRIPTIVE TITLE

CALENDAR DESCRIPTION:

Students will study, discuss and compare current idea and tools being used by business for their data-handling needs. Topics will include a comparison of the leading relational database engines and object-oriented concepts and other approaches being applied to database problems. Distributed systems and client-server technologies will be discussed. Modern relational database architecture and administration will be studied.

PREREQUISITES: CIS 230. Acceptance to the CIS degree program. (Students accepted to a CIS or Computing Science minor may register with permission of the department.) COMP 340 is recommended.

COREQUISITES:

SYNONYMOUS COURSE(S)
(a) Replaces: _____ *(Course #)*
(b) Cannot take: _____ *(Course #)* For further credit.

SERVICE COURSE TO: _____ *(Department/Program)* _____ *(Department/Program)*

TOTAL HOURS PER TERM: **45**

STRUCTURE OF HOURS

Lectures:	**45**	Hrs
Seminar:		Hrs
Laboratory:		Hrs
Field Experience:		Hrs
Student Directed Learning:		Hrs
Other (Specify):		Hrs

TRAINING DAY-BASED INSTRUCTION
LENGTH OF COURSE: _____
HOURS PER DAY: _____

MAXIMUM ENROLLMENT: **35**
EXPECTED FREQUENCY OF COURSE OFFERINGS: **Once per year**
WILL TRANSFER CREDIT BE REQUESTED? (lower-level courses only) ☐ Yes ☐ No
WILL TRANSFER CREDIT BE REQUESTED? (upper-level requested by department) ☐ Yes ■ No
TRANSFER CREDIT EXISTS IN BCCAT TRANSFER GUIDE: ☐ Yes ■ No

AUTHORIZATION SIGNATURES:

Course Designer(s): **Paul Franklin** Chairperson: _____ *(Curriculum Committee)*

Department Head: **Paul Franklin** Dean: **Karen Evans**

PAC Approval in Principle Date: _____ PAC Final Approval Date: December 03, 2003

CIS 430
COURSE NAME/NUMBER

LEARNING OBJECTIVES / GOALS / OUTCOMES / LEARNING OUTCOMES:

At the end of this course, students should understand

- How indexing and hashing can improve performance, and when to use each technique.
- How optimization techniques enable RDBMS to perform better.
- Basic issues involved in tuning and measuring RDBMS performance.
- How object oriented (OODBMS) and object-relational (ORDBMS) databases differ from relational, and when each is useful and preferable.
- What data warehousing is, and the basic issues affecting construction and performance.
- What data mining is, and the methods used.
- Database administrator responsibilities and duties.
- In general, have a good sense of how to use databases, and where each of the specific topics is useful in solving business problems.

METHODS:

Lectures, assignments, and hands-on exercises involving relational database management system operation

PRIOR LEARNING ASSESSMENT RECOGNITION (PLAR):
Credit can be awarded for this course through PLAR ■ Yes ☐ No

METHODS OF OBTAINING PLAR:

Course challenge with departmental approval

TEXTBOOKS, REFERENCES, MATERIALS:
[Textbook selection varies by instructor. An example of texts for this course might be:]

Database Systems, 3rd Edition, Connolly & Begg, Addison-Wesley, 2002
Oracle Education Kit - Oracle9i DBA Fundamentals I

SUPPLIES / MATERIALS:

STUDENT EVALUATION:
[An example of student evaluation for this course might be:]

Assignments	30%
Midterm Exam	35%
Final Exam	35%

COURSE CONTENT:
[Course content varies by instructor. An example of course content might be:]

Indexing and hashing.
Relational optimization techniques.
Performance tuning.
Comparison of modern relational systems.
Object-relational database systems (ORDBMS).
Object-oriented databases (ODBMS).
Data warehousing and data mining.
Oracle9i architecture.
Oracle9i database administration.