UNIVERSITY OF THE FRASER VALLEY

OFFICIAL UNDERGRADUATE COURSE OUTLINE (page 1)

COURSE IMPLEMENTATION DATE:	Winter 1992
COURSE REVISED IMPLEMENTATION DATE:	September 2012
COURSE TO BE REVIEWED:	April 2014
(four years after UPAC approval)	*(month, year)*

OFFICIAL UNDERGRADUATE 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 – see course syllabus available from instructor

CIS 430	**Computer Information Systems**	**3**
COURSE NAME/NUMBER	FACULTY/DEPARTMENT	UFV CREDITS

Advanced Database Topics
COURSE DESCRIPTIVE TITLE

CALENDAR DESCRIPTION:
Students will study, discuss, and compare current processes and tools being used by organizations for their data-handling needs. Topics will include indexing and hashing, performance issues, hands-on database administration, an introduction to data warehousing and data mining, and object-oriented database approaches.

PREREQUISITES: CIS 230 and COMP 251. 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:

PRE or COREQUISITES:

SYNONYMOUS COURSE(S):
(a) Replaces:
(b) Cross-listed with:
(c) Cannot take: for further credit.

SERVICE COURSE TO: *(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:

OTHER:
Maximum enrolment: **35**
Expected frequency of course offerings: Once per year
(every semester, annually, every other year, etc.)

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

Course designer(s):	**Paul Franklin**		
Department Head:	**Ora Steyn**	Date approved:	**January 15, 2010**
Supporting area consultation (Pre-UPAC)		Date of meeting:	**February 19, 2010**
Curriculum Committee chair:	**Edward Lo**	Date approved:	**December 9, 2009**
Dean/Associate VP:	**Dan Ryan**	Date approved:	**March 18, 2010**
Undergraduate Program Advisory Committee (UPAC) approval		Date of meeting:	**April 23, 2010**

LEARNING OUTCOMES:

Upon successful completion of this course, students will be able to :

- Describe how indexing and hashing can improve performance, and when to use each technique.
- Explain how optimization techniques enable RDBMS to perform better.
- Identify issues involved in tuning and measuring RDBMS performance.
- Explain how object oriented (OODBMS) and object-relational (ORDBMS) databases differ from relational, and when each is useful and preferable.
- Describe what data warehousing is, and the basic issues affecting construction and performance.
- Explain what data mining is, and the methods used.
- Execute database administrator responsibilities and duties.
- Use databases, and describe where each of the specific topics in the course is useful in solving business problems.

METHODS: *(Guest lecturers, presentations, online instruction, field trips, etc.)*

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

METHODS OF OBTAINING PRIOR LEARNING ASSESSMENT RECOGNITION (PLAR):

☒ Examination(s) ☒ Portfolio assessment ☒ Interview(s)

☐ Other (specify):

☐ PLAR cannot be awarded for this course for the following reason(s):

TEXTBOOKS, REFERENCES, MATERIALS:

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

Database Systems, 5th Edition, Connolly & Begg, Addison-Wesley, 2010 Oracle Education Kit - Oracle 11g DBA Fundamentals

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.
Oracle current architecture.
Oracle current database administration.