

COURSE IMPLEMENTATION DATE: Winter 1992
 COURSE REVISED IMPLEMENTATION DATE: September 2010
 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. Acceptance to the CIS degree program. (Students accepted to a CIS or Computing Science minor may register with permission of the department.) COMP 251 and COMP 340 are recommended.
Note: COMP 251 is strongly recommended, and will be required for September 2012.

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

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.