INSTRUCTOR: Dr. Le Gruenwald; Office: 233 DEH, Tel. 325-3498; Email: ggruenwald@ou.edu; Office Hours: 3:00 PM - 4:30 PM (Mon, Wed).

COURSE DESCRIPTION: This course concentrates on the concepts and structures necessary to design and implement a database system. It is oriented towards the general principles, their applications, and the relevant theoretical foundation. It does not devote any significant time to discussion of specific commercial packages.


PREREQUISITE: (2413 or 4005) and (2813 or 4005 or Mathematics 2513)

PROJECTS: Projects will be due at the beginning of class (1:30 PM) on the specified dates. Projects that do not meet this requirement will not be graded.

HOMEWORK: Homework will be assigned occasionally in class and will not be graded. Solutions to the homework will be posted on the class home page. It is the students' responsibility to do the homework and evaluate their solutions. Be warned that reading the solutions to the homework without trying to work the problems yourself first is a very poor strategy and will almost certainly result in failure on the tests.

GRADING:
- Midterm Exam 20%
- Final Exam 30%
- Group Projects 25%
- Individual Project 25%

No make-up exams or projects will be given. See the attached "Group Project Grading Policy" for grading on group projects.

COURSE CONTENTS:
- **Topic**
  1. Introduction - Basic Concepts of DBMS
  2. Entity-Relationship Model
  3. Relational Model and SQL
  4. File Organization, Indexing, and Hashing
  5. Formal Query Languages
  6. Functional Dependencies and Normalization
  7. Evaluating and Controlling Technology
  8. Query Processing
  9. Information Security and Privacy
  10. Transaction Management and Database Recovery

- **Reading**
  - Ch.1 (Silberchatz)
  - Ch.7 (Silberchatz)
  - Ch. 2, 3, 4, 5, 7 (Silberchatz)
  - Ch. 10, 11 (Silberchatz)
  - Ch. 6 (Silberchatz)
  - Ch. 8 (Silberchatz)
  - Ch. 7 (Baase)
  - Ch. 12, 13 (Silberchatz)
  - Ch. 9 (Silberchatz), 2 (Baase)
  - Ch.14, 16 (Silberchatz), 8 (Baase)

ABET STUDENT OUTCOMES: This course will be evaluated for the following ABET outcomes:
- e) An understanding of professional, ethical, legal, security and social issues and responsibilities; and
- g) An ability to analyze the local and global impact of computing on individuals, organizations, and society.
**ACADEMIC INTEGRITY:** All individual work submitted for grading (individual project, midterm exam, and final exam) must be done by you only – no collaboration with anyone else is allowed. All group work submitted for grading (group projects) must be done by your assigned group only – no collaboration with other groups or anyone else is allowed. Plagiarism will result in action as specified in the Academic Integrity Code at OU: [http://integrity.ou.edu/files/Academic_Misconduct_Code.pdf](http://integrity.ou.edu/files/Academic_Misconduct_Code.pdf). Consult also the following web page for a Student's Guide to Academic Integrity at OU: [http://integrity.ou.edu/students_guide.html](http://integrity.ou.edu/students_guide.html).

**REASONABLE ACCOMMODATION POLICY:** Students requiring academic accommodation should contact the Disability Resource Center for assistance at (405) 325-3852 or TDD: (405) 325-4173. For more information please see the Disability Resource Center website [http://www.ou.edu/drc/home.html](http://www.ou.edu/drc/home.html). Any student in this course who has a disability that may prevent him or her from fully demonstrating his or her abilities should contact me personally as soon as possible so we can discuss accommodations necessary to ensure full participation and facilitate your educational opportunities.

**RELIGIOUS OBSERVANCE:** It is the policy of the University to excuse the absences of students that result from religious observances and to reschedule examinations and additional required classwork that may fall on religious holidays without penalty.