**GUIDE FOR THE CIS 310 FINAL**

* SQL statements. The questions will focus on the more involved types of statements such as aggregation, correlated subqueries, recursive queries, etc. You may also be asked to write CREATE TABLE, ALTER TABLE, INSERT, DELETE, UPDATE queries.
* You may be asked to discuss different ways of answering an SQL question.
* You may be asked to describe if a given SQL statement is correct and explain why or why not.
* Given an ERD and write a trigger to update the column in one table when another table's row or rows are deleted/inserted/updated. Your trigger must consider all possible scenarios.These scenarios include insert, delete, update involving one row or multiple rows. You may be asked to describe why a given trigger does not work.
* Given an ERD for a transaction database and a set of requirements design a star schema and draw the resulting star schema ERD in Crow's Foot format.
* Understand the design issues in star schema design
* Understand why the differences between a transaction system and a data warehouse exist
* Given a transaction database and a star schema database (could be one you are asked to design), populate the star schema database with data from the transaction database.
* List and describe all the steps in a procedure to populate a star schema database. No code.
* Understand the role of an index in general.
* Understand the structure of an index in general.
* Understand how binary search works. In particular why the max number of comparisons in binary search is log n + 1.
* Understand how a hashed file index is structured.
* Given a set of integers and a hash function, create a hash file with n (will be given) with bucket size of 1 or 2 or 3.
* Understand the concepts in chapters 5, 8, and 9. You may be asked to provide examples to explain those concepts.