COP 4710 – Fall 2013
Exam #2 Review

❑ The exam covers the lecture notes on the course web page from Tuesday September 17th through Tuesday October 22nd. The material covered beginning on Thursday October 24th (Query Processing) will not appear on this test. (See course calendar.)
❑ This material is presented in Chapters 4, 5, and 19 in the textbook.
❑ NOTE: The MySQL specific material will not appear on the exam.

Chapter 4 – Relational Query Languages (2 sets of notes)

- Relational algebra query language
    - Unary operators: Select, Project
    - Binary operators: Union, Difference, Cartesian product, Intersection, Joins, Division
    - Rename operator
- Relational algebra queries – practice, practice, practice!
- Tuple relational calculus queries – practice, practice, practice!
- See HW #2 and also practice/review problems for more examples and practice.

Chapter 5 - SQL

- Basic DDL and DML statements
- Basic SELECT-FROM-WHERE expressions
- Sub-queries.
- Also see practice/review problems for more examples and practice.

Chapter 19 - Normalization

- Normalization
    - functional dependencies
    - closure of a set of functional dependencies – do not worry about all of the different kinds of covers just know why covers are important.
    - 1NF, 2NF, 3NF, BCNF
    - Be able to do a decomposition into 2NF or 3NF.
    - Know what the lossless join and preservation of the dependencies mean in terms of a decomposition scheme.
    - Don't worry about testing for preservation of dependencies – takes too long to work one problem to make a suitable test question. Don't worry about testing for a lossless join.
    - Ignore pages 50-on.

All test questions will be based entirely upon the class notes which are posted on the course web page. Any information in the book which would appear on the test will also appear in the notes. There will be no questions on the test which are based upon material that appears only in the book.