Topics covered in class through the end of Wed. 1/26 (i.e., through the end of Section 4, SQL) are relevant for the midterm:

1. **Motivation and Purpose of DBMS**

2. **Database Design and the E/R Model**
   - Basic concepts: entities and entity types, attributes and keys, relationships and relationship types
   - Entity-Relationship schema (aka ER diagram)
   - Constraints on relationship types
   - Design choices
   - Enhanced Entity-Relationship model features
   - Steps in designing an ER schema
   - Translation of an ER schema to tables

3. **Relational Model and the Relational Algebra**
   - Fundamental Concepts of the Relational Model
   - Integrity Constraints
   - Translation from ER → Relational Database Schema
   - Relational Algebra

4. **SQL**
   - Basic Queries in SQL
   - Set Operations on Relations
   - Nested Queries
   - Null Values
   - Aggregate Functions and Grouping
   - Data Definition Language Constructs
   - Insert, Update, and Delete Statements
   - Views (Virtual Tables)