CS 59000DSP Spring 2020 tentative syllabus:

1) Access Control Models and Systems
   - Discretionary models
   - Mandatory models
   - RBAC models
   - Case studies: System R, Oracle, SQL Server
   - Context-based access control
   - Case study: Oracle VPD
   - Multi-level database systems
   - Case study: Labeled Oracle

2) Database Encryption Architectures

3) Data Integrity Models

4) Research papers (TBI): discussions on the papers

5) SQL Injection attacks

6) Insider threats
   - Case study: Oracle Vault
   - Research approaches: anomaly detection techniques, and machine learning techniques

7) Ransomware
   - Research papers (TBI): discussions on the papers

8) Privacy techniques
   - Foundations: k-anonymity, l-diversity, differential privacy
   - Data transparency: research discussion

9) Digital identity Management