CS5430: Final Examination Information (Fall 2022)

The CS5430 final examination is December 9 at 9am.

The examination covers the course content for the entire semester, although the emphasis will be on material not covered on the mid-term examination.

Any student who has taken the midterm examination, submitted a programming project, and submitted all homework may skip the final examination. If you do not submit a final examination then we will predict the grade you would have received by computing the average of the grades you received on the midterm and programming project.

Here is the reading and notes that were covered in lecture after the mid-term examination.

- **Discretionary access control (DAC)**. All of Chapter 7 (Discretionary Access Control) except for the following: 7.1.3 (Undecidability of Privilege Propagation); pages 123 – 129 (Extension to Support Restricted Delegation, Capabilities Protected by Type Safety); 7.5 (Case Study: Stack Inspection).

- **Mandatory access Control (MAC)**. All of Chapter 8 (Mandatory Access Control) except for the following: pages 165 – 177 (Multi-level Confidentiality, Multi-level Integrity, Domain and Type Enforcement).

- **Credentials-based authorization**. All of Chapter 9 (Credentials-based Authorization) and all slides for "Worked Example" except for the following parts of Chapter 9: 9.2 (A Constructive First-Order Predicate Logic); 9.3 (Extensions to Credentials Authorization Logic) pages 213- 217; 9.5 (Accountability with Constructive Logics); 9.7 (Guard and Credential Pragmatics); 9.8 (Changes to Beliefs); 9.9 (Multi-level Security Revisited.

- **Information Flow**. All slides for "Static Enforcement" and all slides for "Dynamic Enforcement".

- **Isolation**. All of Chapter 10 (Isolation: Mapping and Multiplexing) except for the following: 10.2.4 (Hardware Rings of Protection); 10.3.2 (Binary Rewriting); 10.4 (Containers).

- **Unexpected Communications Channels**. Chapter 13 (Run-time Assumptions under Attack), all of 13.1.