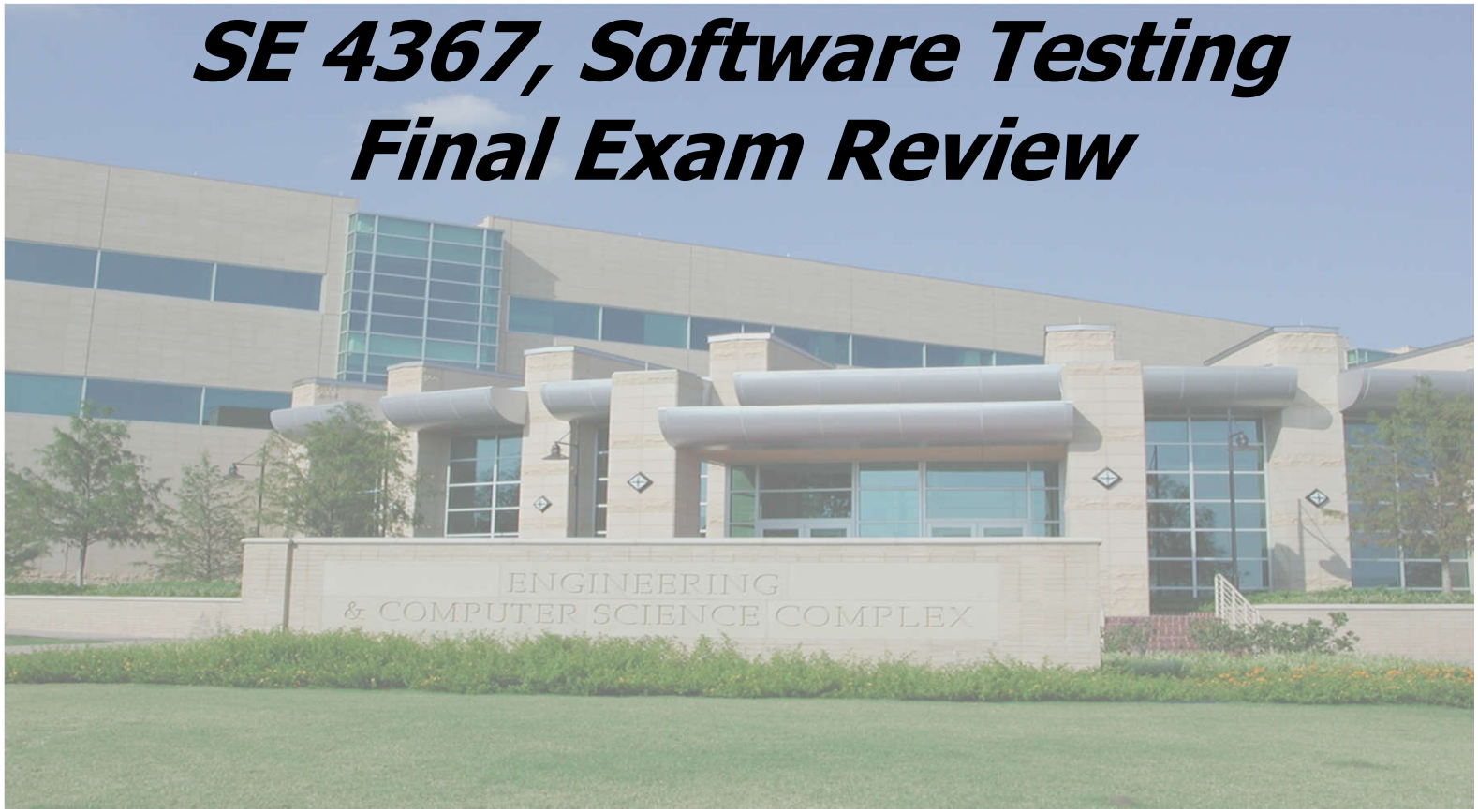
SE 4367, Software Testing
Final Exam Review



Dr. Mark C. Paulk

SE 4367 – Software Testing, Verification, Validation, and Quality Assurance

Jonsson School of Engineering and Computer Science

SE 4367 Schedule

Class meets Tue/Thur 11:30-12:45 in ECSS 2.201

- **you are expected to attend class**

Tue, Jan 9	**Classes begin**
Tue, Feb 27	**Midterm exam (in class)**
March 12-18	**Spring Break (no classes)**
Thur, April 26	**Last day of class**
May 1, 11:00	**Final exam (in class)**

Lecture sequence: see eLearning Presentations folder

Topics

Part II: Test Generation

4. Predicate Analysis
5. Test Generation from Finite State Models
6. Test Generation from Combinatorial Designs

Part III. Test Adequacy Assessment and Enhancement

7. Test Adequacy Assessment Using Control Flow and Data Flow
8. Test Adequacy Assessment Using Program Mutation

Part IV. Phases of Testing

9. Test Selection, Minimization, and Prioritization for Regression Testing
10. Unit Testing
11. Integration Testing

Formal methods
GUI testing
Security testing

Problem Types

BOR, BRO, MI, BOR-MI predicate-based test generation

FSM testing tree, transition cover set

Control flow

- **statement coverage**
- **block coverage**
- **decision coverage**
- **condition coverage**

Data flow graph, dcu/dpu table

Question Types

Primarily problems similar to homework assignments

True/False, fill-in-the-blank, matching, multiple choice

Possibly some discussion questions

- **answer the question asked!**
- **concise answers that are related to the question asked**
- **"extraneous" material may result in points off**

Exam Groundrules

No cell phones, laptops, or calculators

Closed book

One-page set of notes may be used

- **front and back**
- **handwritten or typed**
- **regular size (8½ x 11) paper**

Bring a writing implement

- **pencil and eraser preferred**

In class, at assigned final exam time

- **bring your Comet ID**