

---

# [CS3704] Software Engineering

Dr. Chris Brown  
Virginia Tech  
11/1/2023

# Announcements

---

- **Exam on Friday (11/3)**

---


# Exam Review

---

---

# Exam Details

---

- Online exam
    - Canvas Quiz
    - Accessible online Friday (11/3) 8:00am - 11:59pm
    - 1 hour to complete
      - *i.e., Start before 10:59pm Friday night!*
  - Open-book, notes, lecture slides, etc.
  - You may **NOT** work with others 
  - Exam Review in class next week (11/1)
  - All content except presentations and guest lecture
-

# Exam Details (cont.)

---

## Three sections:

### 1. Key Terms

- a. Matching
- b. Multiple choice (multi-select, T/F,...)

### 2. Scenarios

- a. Open-ended questions
  - i. You do not need to write more than **1-2 sentences max**
  - ii. Be specific (generic answers like “requirements” are **✗**)
  - iii. Do not repeat concepts for multiple questions (i.e. “scrum” can only be used once)

### 3. Application

- a. Mix (Multiple choice, short answer, open-ended,...)
  - b. Analyze code and be able to apply various concepts discussed in class.
-

# Study Guide

---

A detailed study guide for the exam is available on the course GitHub repository:

<https://github.com/CS3704-VT/Course/blob/main/resources/StudyGuide.md>

- Please contact the instructor if you have any remaining questions about the exam.
-

# Sample Questions: Key Terms

---

**What process focuses on discovering requirements for a system?**

- a. Requirements Analysis
- b. Requirements Specification
- c. Requirements Engineering
- d. Requirements Elicitation ✓

**True or False: Modularity is the degree of interdependence between modules?**

- True
- False ✓

**Which topic(s) would you discuss during a stand-up meeting?**

- a. What you need to work on next ✓
  - b. What went well
  - c. What is blocking you ✓
  - d. What you did ✓
-

# Sample Questions: Scenarios

---

- A software engineer on your team is spending too much time on unrelated tasks. What agile practices may help?
  - Standup meeting
  - Kanban
  - Sprint planning
  - Retrospective
  - ...
- You are developing software for an exploration to the bottom of the ocean floor in the 1950s. Explain what software process you would use and why.
  - Code-and-fix
  - (Briefly!) Explain...
- How about in modern times?



# Sample Questions: Application

---

- Calculate the cyclomatic complexity of the func method. 2
- Estimate the number of function points to add functionality to determine if a given number (x) is greater than or equal to 10. How about if x is a number in the Fibonacci sequence? Explain...
- What process would you use to design a user interface for this program? personas, storyboarding, task flow analysis, wireframing, prototyping...

```
def func(x):  
    if x == 2:  
        return True  
    else:  
        return False
```

# Tips

---

- Study!
  - Do not write too much for the scenario-based/open-ended questions.
  - Organize your notes, slides, etc.
  - If questions come up, save them for after the exam.
  - Be familiar with basic Java concepts.
-

# Exam Review

---

Quizizz

---

# Next Time...

---

- **Exam on Friday (11/3)**
- **Study Guide:**  
[main/resources/StudyGuide.md](#)
- Implementation and Maintenance lectures (11/6, 11/8) and presentations (11/10) next week.
- **Continue working on your project!**