CSC131 Spring 2019

# Midterm Study Guide

| No. | Knowledge & Skill Points | Reference |
|---|---|---|
| 1 | Understanding the definition of software, program, sub-program, library, software product (& different types of software product), software engineering, system (& different types of system), model (& different types of model) | Week01_Introduction.pptx |
| 2 | Being able to use activity diagram in practice | Week02_Activitiy Diagrams.pptx |
| 3 | Understanding the definition of a software process, a prototype | Week02-03_Software Processes.pptx |
| 4 | Being able to name all common tasks in software processes | Week02-03_Software Processes.pptx |
| 5 | Being able to describe the process models of Waterfall, Prototyping, Spiral, Agile method (in general), SCRUM | Week02-03_Software Processes.pptx<br>HW04- Modeling Software Processes in Visio |
| 6 | Being able to explain the Pros and Cons of Waterfall, Prototyping, Spiral, Agile method (in general) | In-Class Activity 01 |
| 7 | Understanding the definition of requirement, specification, stakeholder | Week04_Requirements_new.pptx |
| 8 | Understanding the definition of functional and non-functional requirements, and being able to give examples | Week04_Requirements_new.pptx |
| 9 | Being able to specify requirements and write testable specifications | In-Class Activity 02 |
| 10 | Being able to read class & package diagrams (very important for software engineers) | Week05_Class Diagram.pptx<br>In-Class Activity 04<br>HW06- Class Diagram |
| 11 | Understanding the quality of a user interface | Week04-05_Iteraction Design.pptx |
| 12 | Being able to create use case & use case description | HW05- Use Case, Scenarios, UI Design<br>Week04-05_Iteraction Design.pptx<br>In-Class Activity 03 |
| 13 | Being able to explain wireframe, storyboard (models for interaction design) | Week04-05_Iteraction Design.pptx |
| 14 | Understanding important interaction design principle (SAC, CAP, FeVER) | HW05- Use Case, Scenarios, UI Design<br>Week04-05_Iteraction Design.pptx |
| 15 | Understanding the definition of software engineering design | Week06_Engineering Design_new.pptx |
| 16 | Being able to explain the general software design process | Week06_Engineering Design_new.pptx |
| 17 | Being able to explain design principles & rationale (modular, standardization, simplicity, elegance) | Week06_Engineering Design_new.pptx |
| 18 | Being able to evaluate existing designs in terms of modularity, information hiding, cohesion, coupling | In-Class Activity 05 |
| 19 | Being able to explain the motivation of design patterns (iterator, composite, singleton, observer, strategy) | Week06-07_Design Patterns.pptx |
| 20 | Being able to describe the above mentioned design patterns in Item No. 19 in form of UML class diagram | Week06-07_Design Patterns.pptx |
| 21 | Being able to apply the above mentioned design patterns in Item No. 19 to solve design problems | Week06-07_Design Patterns.pptx<br>In-Class Activity 06<br>HW07- Design Patterns |

Notes: The above list covers about 90% of the Midterm exam questions. Book chapters, slides, external links posted in Canvas are additional resources that you should review, in order to achieve a better coverage.