Chapter 9

Design concepts.
What must be understood before the mechanics of design practice are applied?

Impact of design decisions.
The definition of the design stage of software development?

Criteria for good design.
Criteria for good design in software engineering

Define software architecture.
What is the software architecture?

Highest level of abstraction.
Understand different level of abstraction

Architectural model sources.
Identify sources to derive the architectural model

Software design is pivotal.
What is the software engineering design?

Define data abstraction.
What is a data abstraction ?

Separation of concerns.
What is separation of concerns..

Assessing functional independence.
What are the two qualitative criteria to access functional independence?

Chapter 10

Software architecture representations.
What is a representation of software architecture?

Architectural descriptions.
Understand the metaphors that are used within the software architecture language

Responsibility-driven architecture.
Undersand the responsibility-driven architecture.

Architectural styles.
What is an architectural style?

Architectural decisions.
Understand the definition of architectural decisions.

Architectural quality atrributes.
What are the quality attributes for architectural design assessment

Architectural review techniques.
What are the common architectural review techniques?

Static architecture-conformance analysis.
What is SACA ?

Architectural style description.
How to describe the architectural style?

Architectural decision-making.
Why is making good decisions while defining the software architecture critical to the success of a software product?

Chapter 11

Component definition.
What is a component within the software engineering context?

Traditional component.
What are the parts of a traditional component which resides within the software architecture? Understand each part of a traditional component.

Object-oriented component-level design.
What does the component-level design focus when an object-oriented software engineering approach is chosen?

Pragmatic component-level design.
What is a set of pragmatic component-level design guidelines?

Object-oriented cohesion.
What is a cohesion? Why is it important?

Object-oriented component design.
What does a component contain in the context of object-oriented software?

Component design principles.
Understand four principles used to guide component-level design?

Component-level design elaboration.
Elements are required to describe in detail in component design elaboration.

Component-based software engineering.
What is component-based software engineering?

Structured programming constructs.
What are the Dijkstra's constrained logical constructs?

LinkedIn Learning video - Software Design: Modeling with UML

1. The world of software modeling
   Modeling languages
   Types of UML models
   UML modeling tools

2. Getting start with Basics: activity, sequence and communication diagram

From the project – review the following documents:

4. Activity diagram - UML activity diagram pdf word
5. Sequence diagram - UML sequence diagram pdf word
7. Collaboration diagram - Collaboration diagram pdf word