Software Engineering - Video course

**Introduction**
What is Software Engineering.

**Software Development Life-cycle**
Requirements analysis, software design, coding, testing, maintenance, etc.

**Software Requirements Specification**
Waterfall model, prototyping, interactive enhancement, spiral model. Role of Management in software development. Role of metrics and measurement.

**Software Requirement Specification**
Problem analysis, requirement specification, validation, metrics, monitoring and control.

**System Design**
Problem partitioning, abstraction, top-down and bottom-up design, Structured approach. Functional versus object-oriented approach, design specification and verification metrics, monitoring and control.

**Coding**
Top-down and bottom-up, structured programming, information hiding, programming style, and internal documentation. Verification, Metrics, monitoring and control.

**Testing**
Levels of testing functional testing, structural testing, test plane, test cases specification, reliability assessment.

**Software Project Management**
Cost estimation, Project scheduling, Staffing, Software configuration management, Quality assurance, Project Monitoring, Risk management, etc.