Software Engineering:

1. https://www.coursera.org/professional-certificates/google-project-management

2. https://www.coursera.org/specializations/agile-leadership-change-management

3. https://www.coursera.org/specializations/learnquest-certified-scrum-master

4. https://www.coursera.org/specializations/software-development-lifecycle

5. https://www.coursera.org/specializations/agile-development

6. https://www.coursera.org/specializations/test-driven-development

7. https://www.coursera.org/professional-certificates/devops-and-software-engineering

8. https://www.coursera.org/learn/introduction-git-github

9. https://www.coursera.org/specializations/oss-development-linux-git

10.https://www.coursera.org/learn/version-control-with-git

11.https://www.coursera.org/specializations/software-engineering

12.https://www.udacity.com/course/version-control-with-git--ud123

Syllabus:

CO-1: 6

Software and Software Engineering:

Nature of software,

software application domains,

unique nature of web applications,

software engineering,

software process,

software engineering practice,

software myths. Process Models: Generic process model,

prescriptive process models, specialized process models,

unified process, personal and team process models, product and process,

Reverse Engineering: Reverse Engineering to Understand Data,

Reverse Engineering to Understand Processing,

Reverse Engineering User Interfaces

CO-2:

Understanding Requirements: Identify stakeholders,

recognizing multiple viewpoints, eliciting requirements,

Building requirement model, negotiating requirements,

validating requirements, SRS Vs User Stories.

Agile Modeling: Extreme Programming,

Adaptive Software Development (ASD),

Dynamic Systems Development Method (DSDM),

Crystal Feature Driven Development (FDD)

CO-3:

Scrum: Creating a Behavioral and Requirements Modeling,

Design Concepts, design model,

Design issues Scrum Introduction,

Scrum Principles,

Lifecycle of scrum, Adoption Strategies,

common mistakes and misunderstandings of scrum,

Process Mixtures of scrum.

Kanban: Kanban Introduction,

Kanban Foundational Principles,

6 Core Practices of the Kanban, WIP Limits in Kanban,

SAFe Methodology: SAFe Methodology Introduction, Foundations of Scaled Agile Framework,

SAFe Lean-Agile Principles, principles of Agile Manifesto

CO-4:

Test Driven Development: Basics a strategic approach to software testing, strategic issues,

test strategies for conventional software, Black-Box and White-Box testing, validation testing, system testing.

Performing Test Driven Development (TDD) Test,

TDD Vs Traditional Testing, Acceptance

TDD and Developer TDD,

Scaling TDD via Agile Model Driven Development (AMDD),

TDD Vs. AMDD,

Examples of TDD, and Benefits of TDD. JUnit,

The CMMI process improvement framework:

CMMI, Levels, Staged CMMI model,

Continuous CMMI model, Six Sigma Model.