Suggested Teaching Guidelines for

Project – *PG-DBDA Aug 19*

Duration: 120 hrs (20 hrs of class room hours for SDLC and 100 hrs of project)

Objective: To reinforce knowledge of software Project life cycle to understand the project need.

Prerequisites: Sound knowledge about domain

Evaluation method: Internal Exam – 100% weightage

List of Books / Other training material

References:

1. Fundamentals of Software Engineering by Rajib Mall
2. Software Engineering: A Practitioner's Approach by Roger S. Pressman
3. Succeeding with Agile by Mike Cohn
4. Succeeding with Agile: Software Development Using Scrum by Mike Cohn

Session 1: Software Requirements: What and Why

Essential Software requirement, Good practices for requirements engineering, Improving requirements processes, Software requirements and risk management

Session 2:

Introduction to Software and software engineering process, SDLC and process models,Software Requirements (Functional and Non-functional) Analysis and Specification.

Session 3:

OOAD vs SSAD, Discussion on different models like SSAD: DFD, Decision table, Structure chart and OOAD: Use case approach.

Session 4:

UML Diagrams (Use Case, Class, Sequence, Activity, Component & Deployment)

Session 5:

Agile methodologies, transitioning to Agile process like XP and SCRUM, Mapping Agile principles to and values to testing.

Session 6:

Verification and validation ,Testing Concepts, Black box , White box, regression testing, Performance Testing, Testing an application using tool, Making Use case scenarios and test cases, Manual testing

Session 7:

S/w Quality attributes Attribute trade off, Quality assurance and Quality control, Configuration Management (using Tool- SVN) , Github Tool

Session 8:

Project management definition, scope, planning, scheduling, task dependencies, milestones, deliverables, staffing (using Tool- MS Project).

Session 9:

Assignment 1. Carrying out a system study and creating a SRS document.

Session 10:

Assignment 2. Writing effective test cases.

Suggested Teaching Guidelines for

Project – *PG-DBDA Aug 19*

Guidelines:

- Rigor kind of Projects should be allowed
- No more retrieval kind or exploration types of project should be entertained.
- Students should either go for Hadoop-Spark or for Deep neural networks using Tensorflow(Keras)
- They should work with certainly good amount of versatile data of around 100GB
- They also should be encouraged to solve society problem with their domain knowledge.