Software Project Management

UNIT I

Software Project Management: Introduction, Principles of Project Management, WBS, Process Groups, Knowledge Areas, Models, Methods and Artifacts, Stakeholder Management, Capstone

Tools: Microsoft Project, Gannt Charts

Learning Objectives:

1. By the end of this lesson, the student will be able to *create* an end-to-end project plan to address the complex software delivery dealing with the principles and practices of traditional Project Management.

UNIT II

Software Product Management: Product Life Cycle, Product Manager, Product Vision and Strategy, Product Discovery, Product Design, Product Roadmaps, Product Backlog, Prioritization Techniques, Competitive and Market Analysis, MVP, GTM (Go to Market), Product Analytics, Capstone

Tools: Figma, Google Analytics, Hotjar

Learning Objective(s):

2. By the end of this lesson, the student will be able to *design* and *develop* innovative software products by addressing complex user problems dealing with the principles and practices of Product Management.

UNIT III

Agile Project Management: Fundamentals of Agile Project Management, Agile Manifesto, Roles and Responsibilities, Preparing for Agile Project Management, Pre-project, Foundation process and Products, Evolutionary Development, Techniques and Practices, Agile Planning, Agile Control

Tools: -

Learning Objective(s):

3. By the end of this lesson, the student will be able to *compare* and *determine* whether using traditional project management or agile project management would be more appropriate for a project.
4. By the end of this lesson, the student will be able to *develop* agile project plans to address the complex software delivery and the problems arising out of the traditional methods by applying Agile manifesto and the practices.

UNIT IV

Scrum: Scrum Definition and Framework, Scrum Theory, Scrum Values, Scrum Team, Scrum Events, Scrum Artifacts, User Story & Acceptance Criteria, Sizing Stories, Capacity Planning, Velocity of a Team, KPI's, Iterative vs Incremental Development, Release Planning

Tools: Jira/Trello, Planning Poker

Learning Objective(s):

5. By the end of this lesson, the student will be able to *apply* the world's popularly used scrum farmwork and practices to take agile project management to its next level for efficient, value-based delivery and increased stakeholder satisfaction.

Textbooks4 & References:

1. A Guide to the Project Management Body of Knowledge (PMBOK Guide) 7th Edition - Project Management Institute (PMI), ISBN-13: 978-1628256642
2. Software Product Management, By: Hans-Bernd Kittlaus (Author), Samuel A. Fricker (Author), Samuel A Fricker (Author) - Springer-Verlag Berlin and Heidelberg GmbH & Co. KG
3. Learning Agile: Understanding Scrum, XP, Lean, and Kanban by Andrew Stellman (Author), Jennifer Greene (Author) - O'Reilly, ISBN-13: 978-9351108986
4. https://www.wrike.com/product-management-guide/product-management-definition/
5. https://www.atlassian.com/agile/product-management
6. https://www.aha.io/roadmapping/guide/product-managementf
7. https://agilemanifesto.org/
8. https://scrumguides.org/scrum-guide.html