Course: SE811 Software Maintenance
Final Examination 2023 Syllabus

Chapter	Covered Topics
Chapter 1: Basic Concepts and Preliminaries	Software Evolution Software Maintenance
Chapter 2: Taxonomy of Software Maintenance and Evolution	Intention-Based Classification of Software Maintenance Activity-Based Classification of Software Maintenance Evolution of Software Systems - SPE Taxonomy (S-type, P-type) - Laws of Software Evolution (Lehman's Laws)
Chapter 3: Evolution and Maintenance Models	The Staged Model for Closed Source Software The Staged Model for Free, Libre, Open Source Software IEEE/EIA 1219 Maintenance Process ISO/IEC 14764 Maintenance Process CR Workflow
Chapter 4: Reengineering	General Idea Reengineering Concepts A General Model for Software Reengineering - Types of Changes (Rethink, Respecify, Redesign, Re-code) - Software Reengineering Strategies (Rewrite, Rework, Replace) - Reengineering Variations Code Reverse Engineering Techniques Used for Reverse Engineering
Chapter 5: Legacy Information Systems	General Idea Migration Migration Planning
Chapter 6: Impact Analysis	General Idea Impact Analysis Process - Identifying the SIS - Analysis of Traceability Graph - Identifying the Candidate Impact Set Dependency-Based Impact Analysis - Call Graph - Program Dependency Graph (Static Slice, Dynamic Slice)
Chapter 8: Program Comprehension	General Idea Basic Terms (Goal of Code Cognition, Knowledge, Mental Model, Understanding Code)
Others	Maintenance Measurement - Size (LOC), Cyclomatic Complexity, Halstead Metrics, Maintainability Index