15 Week Lecture Plan:

Week	Unit/Hours	Topic	Lab
Week – 1	Unit – 1 (3 Hours)	Concepts of Testing, TEmb method,	Test plan and the elements that it identifies
Week – 2	Unit – 1 (3 Hours)	Software testing life cycle	Write test strategy for the set of requirements: -An "**Embedded Unit Instrument**" product.
Week – 3	Unit – 2 (3 Hours)	Dynamic Testing	Lab on BVA and equivalence partitions
Week – 4	Unit-2(3 Hours)	Model-Based Testing	Assignment on model based testing
Week – 5	Unit-2(3 Hours)	Coverage Testing	For a given set of requirements after identifying the test case/scenarios: -Establish a coverage using coverage tools
Week – 6	Unit-3(3 Hours)	Code Reviews	Reading assignment on code reviews
Week -7	Unit-3 (3 Hours)	Static Analysis	Walkthrough of Understand for C/C++, a static analysis tool
Week – 8	Unit-3 (3 Hours)	Metrics	Study assignment on metrics
Week – 9	Unit-4 (3 Hours)	Software Integration	Study assignment on software integration
Week – 10	Unit-4 (3 Hours)	Testing from Use Cases	Test Case & Defect Management with Testlink / Bugzilla
Week – 11	Unit-4 (3 Hours)	Regression Testing	Assignment on regression testing
Week – 12	Unit-4(3 Hours)	Regression Testing	Assignment on regression tesing
Week – 13	Unit-5 (3 Hours)	Configuration Management	Using a version control tool such as SVN, create a CI (configuration item) baseline for the EST class materials with the help of the below SCM process
Week – 14	Unit-5 (3 Hours)	Test Management	Lab on Test case and defect management
Week – 15	Unit-5 (1Hours)	Test-driven development	Study assignment on test driven development

40 hour lecture Plan

Hour	Lecture Name	Learning Outcome Mapping
Hour-2	Concepts of Testing	L1
Hour-4	TEmb method, Test cases and test procedures	L1
Hour-6	Software testing life cycle	L2
Hour-9	Dynamic Testing	L3
Hour-11	Model-Based Testing	L3
Hour-12	Generating tests from state diagrams	L3
Hour-14	White-box, grey and black box tests	L3
Hour-15	Coverage measures	L3
Hour-18	Code Reviews	L3
Hour-19	Static analysis concepts	L4
Hour-20	compiler for static analysis	L4
Hour-21	Static analysis tools, coding standards	L4
Hour-23	Software Integration	L5
Hour-25	Top-down vs Bottom-up Integration	L5
Hour-27	Testing from Use Cases	L5
Hour-29	Generating test cases from use cases	L5
Hour-30	Regression Testing	L5
Hour-32	Purpose of regression tests, the build process	L6
Hour-34	Configuration Management	L6
Hour-36	Change Management, CM tools	L6
Hour-38	Test Management	L6
Hour-40	Test-driven development, agile development	L6