SYSM6310 - Software Testing, Validation and Verification

SYSM 6310 (CE 6367 and CS 6367 and SE 6367) Software Testing, Validation and Verification (3 semester credit hours) Fundamental concepts of software testing. Functional testing. GUI based testing tools. Control flow based test adequacy criteria. Data flow based test adequacy criteria. White box based testing tools. Mutation testing and testing tools. Relationship between test adequacy criteria. Finite state machine based testing. Static and dynamic program slicing for testing and debugging. Software reliability. Formal verification of program correctness. Prerequisite: CE 5354 or CS 5354 or SE 5354. (3-0) Y