

SE6389 - Formal Methods and Programming Methodology

[SE 6389](#) Formal Methods and Programming Methodology (3 semester credit hours) Formal techniques for building highly reliable systems. Use of abstractions for concisely and precisely defining system behavior. Formal logic and proof techniques for verifying the correctness of programs. Hierarchies of abstractions, state transition models, Petri Nets, communicating processes. Operational and definitional specification languages. Applications to reliability-critical, safety-critical, and mission-critical systems, ranging from commercial computer communication systems to strategic command control systems. Prerequisite: [SE 5354](#). (3-0) Y