SE3306 - Mathematical Foundations of Software Engineering

**SE 3306** Mathematical Foundations of Software Engineering (3 semester credit hours) Boolean logic, first-order logic, models of first-order logic. Introduction to program verification, applications in software engineering. Completeness Theorem. Regular expressions, regular sets, finite-state machines, and applications in software engineering. Graph Theory, graph algorithms. Statecharts, Petri Nets and their role in software engineering. Credit cannot be received for both courses, **CS 3305** and **SE 3306**. Double majors are required to take **CS 3305**. Prerequisite: (**CE 2305** or **CS 2305** or **TE 2305**) with a grade of C or better or equivalent. (3-0) S