CS3341 - Probability and Statistics in Computer Science and Software Engineering

CS 3341 Probability and Statistics in Computer Science and Software Engineering (3 semester credit hours)
Axiomatic probability theory, independence, conditional probability. Discrete and continuous random
variables, special distributions of importance to CS/SE, and expectation. Simulation of random variables
and Monte Carlo methods. Central limit theorem. Basic statistical inference, parameter estimation,
hypothesis testing, and linear regression. Introduction to stochastic processes. Illustrative examples and
simulation exercises from queuing, reliability, and other CS/SE applications. Credit cannot be received for
both courses, (CS 3341 or SE 3341 or STAT 3341) and ENGR 3341. Prerequisites: (MATH 1326 or MATH 2414 or
MATH 2419), and (CE 2305 or CS 2305 or TE 2305 with a grade of C or better). (Same as SE 3341 and STAT 334
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