

Introduction to Logic Design

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Overview:

This book is designed for a first course in logic design, taken by computer science, computer engineering and electrical engineering students (most commonly as sophomores). Its special strengths are a clear presentation of fundamentals and an exceptional collection of examples, solved problems, and exercises. It integrates laboratory experiences (both with hardware and via computer simulation), while not making these experiences critical to the main flow of the text.

Design is emphasized throughout the text. Switching algebra is developed as a tool for analyzing and implementing digital systems. The book contains an excellent presentation of minimization of combinational circuits, including multiple output ones, using the Karnaugh map and iterated consensus. There are a number of examples of the design of larger systems, both combinational and sequential, using medium scale integrated circuits and programmable logic devices.