



CHAPTER 4

LECTURE OUTLINE

Computer Science Illuminated, Seventh Edition

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Gates and Circuits

4.1 Computers and Electricity

4.2 Gates

NOT Gate

AND Gate

OR Gate

XOR Gate

NAND and NOR Gates

Review of Gate Processing

Gates with More Inputs

4.3 Constructing Gates

Transistors

4.4 Circuits

Combinational Circuits

Adders

Multiplexers

4.5 Circuits as Memory

4.6 Integrated Circuits

4.7 CPU Chips

Summary

Ethical Issues: Codes of Ethics

Key Terms

Exercises

Thought Questions