Introduction to graph theory. (English summary)

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From the preface: “Graph theory is a delightful playground for the exploration of proof techniques in discrete mathematics, and its results have applications in many areas of the computing, social, and natural sciences. The design of this book permits its use in a one-semester introduction at the undergraduate or beginning graduate level, or in a patient two-semester introduction. No previous knowledge of graph theory is assumed. Many algorithms and applications are included, but the focus is on understanding the structure of graphs and the techniques used to analyze problems in graph theory.”

Contents: Preface; Chapter 1. Fundamental concepts; Chapter 2. Trees and distance; Chapter 3. Matching and factors; Chapter 4. Connectivity and paths; Chapter 5. Graph coloring; Chapter 6. Edges and cycles; Chapter 7. Planar graphs; Chapter 8. Additional topics (optional).

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