# Introduction to Mathematical Modeling

# Compartmental Models

# Models of Single Populations

# Numerical Solution of Differential Equations

# Interacting Population Models

# Phase-Plane Analysis

# Linearization Analysis

# Some Extended Population Models

# Formulating Basic Heat Models

# Solving Time-Dependent Heat Problems

# Solving Heat Conduction Problems

# Introduction to Partial Differential Equations

# Appendix A: Differential Equations

# Appendix B: Further Mathematics

# Appendix C: Notes on Maple and MATLAB

# Appendix D: Units and Scaling

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