

# An Introduction to Numerical Methods using MathCAD 14

By K. A. Ansari

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## An Introduction to Numerical Methods using MathCAD 14 By K. A. Ansari

An Introduction to Numerical Methods using Mathcad is designed to be used in any introductory level numerical methods course. It provides excellent coverage of numerical methods while simultaneously demonstrating the general applicability of Mathcad to problem solving. This textbook also provides a reliable source of reference material to practicing engineers and scientists and in other junior and senior-level courses where Mathcad can be effectively utilized as a software tool in problem solving.

A principal goal of this book is to furnish the background needed to create Mathcad documents for the generation of solutions to a variety of problems. Specific applications involving root-finding, interpolation, curve-fitting, matrices, derivatives, integrals and differential equations are discussed and the broad applicability of Mathcad demonstrated. Wherever appropriate, the use of Mathcad functions offering shortcuts and alternatives to otherwise long and tedious numerical solutions is also demonstrated.

At the end of every chapter a set of problems is included to be solved covering the material presented. A solutions manual to these exercises can be made available to instructors.


K. Akbar Ansari is a professor of mechanical engineering at Gonzaga University. He is currently involved in teaching courses in engineering mechanics, numerical methods, advanced engineering mathematics, vibrations, system dynamics and controls and machine design.

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