Leadership by Engineers and Scientists: Professional Skills Needed to Succeed in a Changing World
Dennis W. Hess

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DESCRIPTION

Teaches scientists and engineers leadership skills and problem solving to facilitate management of team members, faculty, and staff

This textbook introduces readers to open-ended problems focused on interactions between technical and nontechnical colleagues, bosses, and subordinates. It does this through mini case studies that illustrate scenarios where simple, clear, or exact solutions are not evident. By offering examples of dilemmas in technical leadership along with selected analyses of possible ways to address or consider such issues, aspiring or current leaders are made aware of the types of problems they may encounter. This situational approach also allows the development of methodologies to address these issues as well as future variations or new issues that may arise.

*Leadership by Engineers and Scientists* guides and facilitates approaches to solving leadership/people problems encountered by technically trained individuals. Students and practicing engineers will learn leadership by being asked to consider specific situations, debate how to deal with these issues, and then make decisions based on what they have learned. Readers will learn technical leadership fundamentals; ethics and professionalism; time management; building trust and credibility; risk taking; leadership through questions; creating a vision; team building and teamwork; running an effective meeting; conflict management and resolution; communication; and presenting difficult messages.
• Describes positive traits and characteristics that technically-trained individuals bring to leadership positions, indicates how to use these skills, and describes attitudes and approaches necessary for effectively serving as leaders

• Covers negative traits and characteristics that can be detrimental when applied to dealing with others in their role as leaders

• Discusses situations and circumstances routinely encountered by new and experienced leaders of small teams

• Facilitates successful transitions into leadership and management positions by individuals with technical backgrounds

• Indicates how decisions can be reached when constraints of different personalities, time frames, economics, and organization politics and culture inhibit consensus

• Augments technical training by building awareness of the criticality of people skills in effective leadership

Leadership by Engineers and Scientists is an excellent text for technically trained individuals who are considering, anticipating, or have recently been promoted to formal leadership positions in industry or academia.

ABOUT THE AUTHOR

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