Elementary Surveying: An Introduction to Geomatics, 10th Edition

Paul Richard Wolf, Charles D. Ghilani
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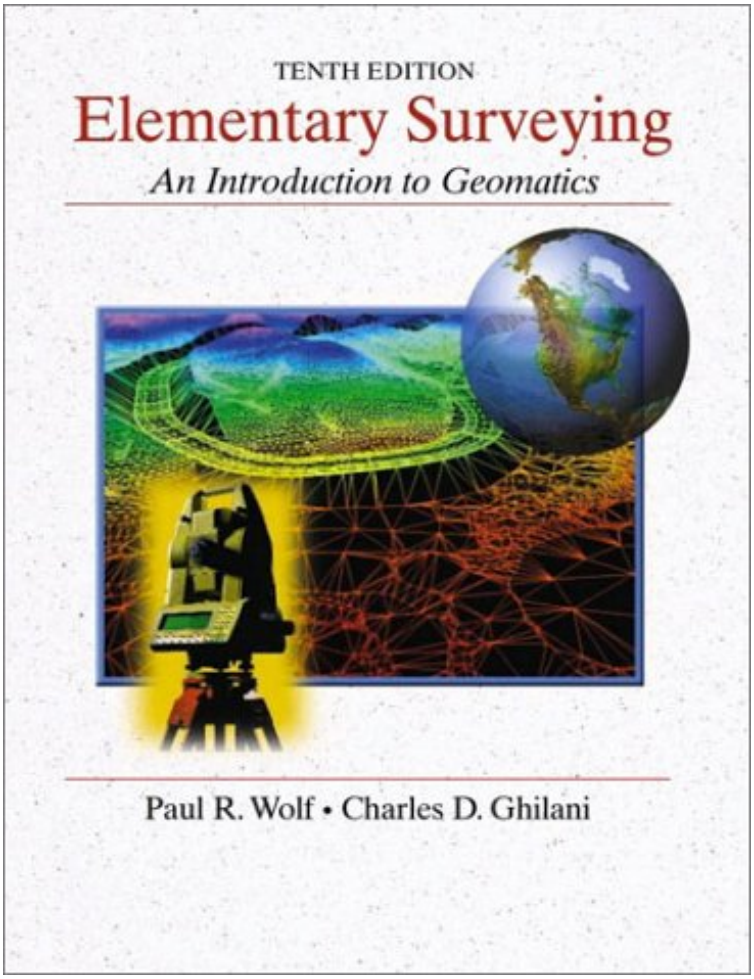

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Paul Richard Wolf, Charles D. Ghilani : Elementary Surveying: An Introduction to Geomatics, 10th Edition before purchasing it in order to gage whether or not it would be worth my time, and all praised Elementary Surveying: An Introduction to Geomatics, 10th Edition:

33 of 34 people found the following review helpful. surveying : The foundations of surveying explained.By Jonathan MacraeSurveying is the foundation of all of civilisations. The world would not be the same without the methods of surveying used by proffessionals.This book was an essential refference during my study at university and is still used in my professional carrer.From the first page you will be learning varrious ellements of surveying. The explination of fundumental elements of surveying methods and the changes to surveying caused by technology are explained at the start to give a foundation from which to work from. The different types of surveying is explained in good detail covering the concepts of bearings, angle measurement and lots of others. The covering of work related area's and problems are discussed and covered. This includes curves and roads, mapping and photogrammetry along with

sections relating to area and volume determination.There is numerous pictures, illustrations and diagrams used to show the equipment and show the concepts covered.If I was starting my education in surveying or wishing to have a good refference then this should be reccomended as a text worth holding in your library.1 of 1 people found the following review helpful. Good for students, useless for real world applicationBy MiddyI bought this when I was running multiple survey crews over the course of 8 years. I found that it wound up serving as a paper weight or a door stop more often then not. With the high tech stuff we used to layout sites, we didn't need a book that spend 60% of it's space trying to teach super complex mathematics. Most of what this book is trying to teach is done in every single surveying tool either automatically, or by inputting a few settings in something like autocad or Terramodel.I was the supervisor of numerous college kids just coming out of survey programs in NC State, or Wake Tech, and the poor guys didn't have a clue. They could tell me how to calculate various things on paper, but real world application they had no idea. This book would have been better off teaching more about the equipment and techniques used, instead of trying to do what it did.It'd be like taking a class entitled "Introduction to Windows 7" and they spent 90% of the class trying to teach you to write/compile the computer code yourself.0 of 0 people found the following review helpful. Three StarsBy DoolesPIshipping was fast but it was not the book I intend to keep, should have rented

*This book has been written primarily for freshman and sophomore students at the college level. The authors have concentrated on preparing a readable text that presents basic concepts and practical material. Each of the fundamental areas of modern surveying (geomatics) are discussed. Although the book is elementary, its depth and breadth make it suitable for self study, and for use as a reference by those engaged in the practice of surveying and its related disciplines such as civil engineering, forestry, geography, geology, landscape architecture, and others. *This 10th edition has been completely revised and updated, and includes the newest developments in both field and office procedures in surveying. Many additions and changes have made this the most up-to-date textbook available in surveying. *As with past editions, this text continues to emphasize the presence of errors in surveying, and practical suggestions resulting form the authors' many years of experience are interjected throughout the book.

From the Back Cover Elementary Surveying has been the best selling surveying text for many years. The authors continue to focus on the text's readability and clear presentation of basic concepts and practical material in each of the areas fundamental to the practice of surveying (geomatics). Although the book is elementary, its depth and breadth have made it suitable for self study, and for use as a reference by those engaged in the practice of surveying and its related disciplines such as civil engineering, forestry, geography, geology, landscape architecture, and others. As with past editions, this text continues to emphasize the presence of errors in surveying, while practical suggestions resulting from the authors' many years of experience are interjected throughout the book. This tenth edition of Elementary Surveying (An Introduction to Geomatics) has been substantially updated and modified to reflect the rapidly changing nature of surveying (geomatics). Many additions and changes have been made to keep this the most up-to-date textbook available in surveying. New to the tenth edition: Expansion of GPS coverage into two chapters. Contains an in-depth treatment of the subject in both the theory of GPS and field and office procedures in GPS. Relevant website links given throughout the book. Enables students to self-explore topics discussed in the book and obtain the latest material on surveying standards. New Wolfpack CD included with the book. Contains computer programs for solving the different types of surveying problems, and includes help files as well as sample data files. Modernized discussions and graphics. Describes the new instruments currently being used in industry, introductory geodetic calculations, coordinate geometry, new state plane coordinate computation procedures, etc. Every chapter contains a new set of problems, and a revised and updated bibliography. Excerpt. Reprinted by permission. All rights reserved. This Elementary Surveying: An Introduction to Geomatics, Tenth Edition has been updated to reflect the changing nature of modern surveying practicecurrently often referred to as "geomatics." Since this new term is now generally accepted in English-speaking countries worldwide, and is consistent with modern practice as currently evolving in the United States, it is an appropriate addition to the book's title. It is hoped this new edition will not only serve the needs of its traditional surveying and engineering users, but that it will also be suitable for the expanding audience of spatial data users in various other disciplines. Written primarily for freshman and sophomore students at the college level, the authors have endeavored to present a readable text that presents basic concepts and practical material in each of the areas fundamental to modern surveying (geomatics) practice. Although the book is elementary, its depth and breadth also make it ideal for self study. This tenth edition includes more than 400 figures and illustrations to help clarify discussions, and numerous example problems are worked to illustrate computational procedures. The order of chapters in the book has been reorganized to better accommodate schedules followed in most surveying laboratories, particularly those in northern climates. Thus, the material on leveling has been presented ahead of distance measurement by taping and electronic methods. Discussions of total station instruments and angle measurements follow these topics. Recognizing the increasing importance of the global positioning system (GPS), this subject has been ;.moved forward in the chapter sequence to follow total station instruments and o; angle measurements. Also the GPS coverage has been expanded into two chaptersChapter 13 introduces the principles of GPS operation, and

Chapter 14 discusses field and office procedures in using the equipment. The subjects of leasts-quares adjustments and coordinate geometry have been upgraded and moved from the appendix into separate chapters in the main text. This is consistent with the increasing importance of these two topics, which have become so vital in connection with both GPS and geographic information systems (GIS). In keeping with the goal of providing an up-to-date presentation of surveying equipment and procedures, total stations are stressed as the instruments for making angle and distance measurements. Transits and theodolites, which are now only rarely used in practice, are just briefly introduced in the main body of the text. Similarly, automatic levels are now the dominant instruments for elevation determination, and accordingly their use is stressed. Dumpy levels, which nowadays are seldom used, are only briefly mentioned in the main text. However, for those who still use these instruments, they are covered in more detail in Appendix A. In addition to the major changes noted above, other additions, revisions, and modifications have been made throughout the book. These include the following: A new section on surveying safety has been added, and the use of metric units has been expanded in discussion, in example problems, and in after-chapter homework problems. The latest versions of surveying equipment are presented, and include such devices as digital levels, reflectorless EDM instruments, laser alignment equipment, digital cameras and scanners. Discussion of metric stationing has been expanded within the topics of profile leveling, horizontal and vertical curves, and construction surveying. The material on state plane coordinates has been updated, and the chapter on control surveying has been substantially revised and expanded to present some introductory concepts of geodesy, and also provide greater depth of coverage on datums and reference coordinate systems. The coverage of condominium surveys has been expanded in the chapter on boundary surveys. In the chapter on photogrammetry, modern procedures and equipment have been presented, including the latest developments in softcopy photogrammetry and digital orthophoto production. Discussions on interfacing an aerial camera and GPS equipment in the aircraft to supplement ground control, and new airborne laser mapping systems are also presented. The chapter on GIS has been revised and updated. Website addresses that enable students to obtain additional information on many different topics are given throughout the book. Also, the bibliographies that follow each chapter have been updated. A compact disc containing many useful computer programs accompanies the book. The CD has its own documentation in the form of help- and sample-data files. The disk contains programs for traverse computations for polygon, link, and radial traverses; area calculations; astronomical azimuth reduction; two-dimensional coordinate transformations; horizontal and vertical curve computations; and least-squares adjustments. It also contains trial versions of field-to-finish software. As with past editions, this text continues to emphasize the theory of errors in surveying work. At the ends of most chapters common errors and mistakes related to the topics covered are listed so that students will be reminded to exercise caution in all of their work. Practical suggestions resulting from the authors' many years of experience are interjected throughout the text. More than 1000 after-chapter problems are presented to give instructors a wide choice in making assignments. A solution's manual is available to instructors who adopt the book. ACKNOWLEDGMENTS Past editions of this book, and this current one, have benefited from the suggestions, reviews, and other input from numerous students, educators, and practitioners For their help the authors are extremely grateful. In this edition, those professors and graduate students who reviewed material or otherwise assisted include: Earl Hurkholder ,New Mexico State University, Las Cruces, NM; Jonathan Chipman, University of Wisconsin, Madison; Bon Dewitt, University of Florida, Gainesville, FL; Francis Derby, Pennsylvania State University, Wilkes-Barre Campus, Lehman, PA; Paul Dukas, University of Florida, Gainesville, FL; Gary Jeffress, Texas AM University-Corpus Christi, Corpus Christi, TX; Philip Hampson, Sherry Kopec, Matthew Lieb, John Muklewicz, and Lewis Strunk, Pennsylvania State University, Wilkes-Barre Campus, Lehman, PA; Thomas Lillesand, University of Wisconsin-Madison, Madison, WI; John Margitan, Nicolet Area Technical College, Rhinelander, WI; Gerald Mahun, Madison Area Technical College, Madison, WI; Ryan Morrison, University of Florida, Ganesville, FL; Brian Naberezny, University of Maine, Orono, ME; Ronald Robichaud, Nova Scotia Community College, Lawrencetown, NS, Canada; Robert Schultz, Oregon State University, Corvallis, OR; and Alan Vonderohe, University of Wisconsin-Madison, Madison, WI. Practitioners who assisted include Ken Brockman, Paul Hartzheim, and Glen Schaefer, Surveying and Mapping Section, Wisconsin Department of Transportation, Madison, WI; Eduardo Fernandez-Falcon, Topcon America Corporation; Jesse Kozlowski, GPS Innovations; Donald Mulcare, Maryland State Geodetic Advisor; Arden Sandsness, Royal Oak Engineering, Madison, WI; Jerry Wahl, U.S. Bureau of Land Management, and Timothy Wolf (the author's son), Las Vegas Valley Water District, Las Vegas, NV In addition, the authors wish to acknowledge the contribution of charts, maps, or other information from the National Geodetic Survey, the U.S. Geological Survey, and the U.S. Bureau of Land Management. Also appreciation is expressed to the many instrument manufacturers who provided pictures and other descriptive information on their equipment for use herein. Special acknowledgment is given to Eagle Point Software, Inc., SDC Survey, and MicoSurvey Software, Inc. for supplying trial versions of their field-to-finish software which are included in the CD that accompanies this book. To all of those named above, and to any others who may have been inadvertently omitted, the authors are extremely thankful. Finally, special recognition and thanks are expressed posthumously to Professor Russell C. Brinker, who coauthored this book from its third through its ninth editions. He passed away recently at the age of 95, after a distinguished career as a surveying educator and author. Paul R. Wolf, Madison, WI Charles D.

Ghilani, Lehman, PA Postscript: In order to improve future editions, the authors will gratefully accept any suggestions or constructive criticisms of this edition.