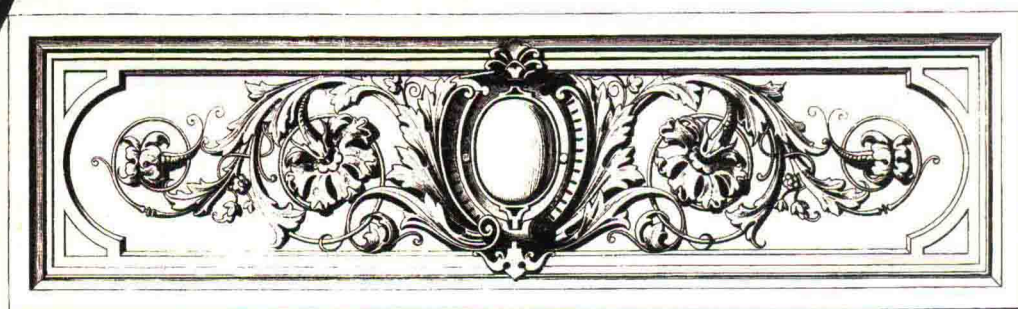


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CONCEPTS *of Pattern Grading*

Techniques for Manual and Computer Grading * 2nd Edition

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Concepts of Pattern Grading

Second Edition

Techniques for Manual and Computer Grading

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Library of Congress Catalog Card Number: 2008 923045

ISBN-13: 978-1-56367-697-0

GST R 133004424

Printed in the United States of America

TP09

Concepts of Pattern Grading

Second Edition



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Preface

Pattern grading is the process of systematically increasing and decreasing the size of a master pattern to create a range of sizes. *Concepts of Pattern Grading: Techniques for Manual and Computer Grading, Second Edition*, is a comprehensive textbook that focuses on pattern grading using the Cartesian graph. Concepts are presented with a mix of theory and practice to facilitate the learning process.

Chapter 1 surveys the history of anthropometric studies and the development of sizing specifications and grade guides. Appendixes A through C are provided to allow the more advanced student to understand how grade guides are developed. Chapter 1 and the appendixes are theory-based for the student who is seriously interested in the development of grading systems that result in a range of sizes.

Chapters 2 through 4 cover the concepts and principles of pattern grading. Since computerized grading incorporates the Cartesian graph orientation, the grading concepts introduced in these chapters are based on using the graph. These chapters guide the student through manually marking and grading a basic pattern block. The differences and similarities of manual and computerized grading are discussed.

Grading problems are introduced in Chapters 5, 6, and 7. The examples presented are representative of basic garment designs. In these chapters the student learns how a grade is distributed through different garment patterns and begins writing grade rules. Grade distributions are presented in a grade rule table format to facilitate the learning process. This format also facilitates the transition to computerized grading.

Chapters 8 through 11 contain more advanced grading problems and require a thorough understanding of the grading principles. Chapter 8 discusses the use of alternative reference axes for more complex pattern designs. Grading stretch fabric garments is explained in Chapter 9, and grading from garment specifications is discussed in Chapter 10. Chapter 11 focuses on converting a numerical sizing chart to an alphanumeric sizing chart. Completion of the exercises in these chapters will result in a valuable reference book that can be useful in the workplace.

The grading system used in this text is derived from the PS 42-70 Grade Guide because this data is readily available and contains sufficient information to develop both complex and simplified grading systems. The disadvantage of using the PS 42-70 Grade Guide is that the size nomenclature does not reflect the comparable sizes in most ready-to-wear. For example, the PS 42-70 size 12 is generally closer to ready-to-wear size 8 as defined in the American Society for Testing and Materials (ASTM) Standard Table of Body Measurements for Adult Female

Misses Figure Type, Sizes 2–20 (D 5585-95). However, the advantage is that other anthropometric data can be substituted in the simplified system because the developmental method used to create grade guides is the same regardless of the body dimensions used. As body scanning data becomes available and is published, the processes explained in this text can be applied to develop grading systems for selected target markets.

The fewer sizes there are in the size range, the better the fit will be in the extreme sizes when using the simplified system. The authors therefore recommend the use of more than one sample-size pattern for a size range of six or more sizes. However, the problems in this book use a wide range to give students the experience of grading across the 1-inch, the 1 1/2-inch, and the 2-inch grades. It should be noted that grading a pattern does not improve the fit of a garment. The apparel industry uses grading techniques because it is cheaper to grade a pattern than to make individual patterns for each size in a production run.

Acknowledgments

The authors wish to thank the following people for their cooperation and aid. First, the students who have been enrolled in the pattern grading course at Radford University as we wrote the book. They have endured our trials and failures and most of all provided valuable input. Our colleagues and former colleagues at Radford University, Baylor University, and Wolff Fording and Company gave us encouragement, input, and support for this project. We thank Alan Young for his proofreading expertise and the fortitude to read our text out of the kindness of his heart. The reviewers selected by the publisher for the first edition of this book were very helpful. They include Susan Suarez, Fashion Careers of California; Bonnie Belleau, Louisiana State University; Elizabeth Bye, University of Minnesota; Ann Stemm, Illinois State University; Mary Farahnakian, Brigham Young University; Mela Hoyt-Heydon, Fullerton College; and Nancy Staples, Clemson University.

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