



# Short-Term Internship Programme

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#### ***INTRODUCTION***

Textiles have such an important bearing on our daily lives that everyone needs to know something about them. From earliest times, people have used textiles of various types. Today, textiles are still used for various purposes and everyone is an ultimate consumer. You use textiles in some form even if you are not the direct purchaser. Included among consumers are merchandisers, from the wholesale textile manufacturer and merchant to the sales force in any retail store. Many industries, such as the automobile industry, are important consumers of textiles in various forms. Some other consumers are homemakers, dressmakers, interior decorators, and retail-store customers, as well as students who are studying for these and various other occupations and professions in which knowledge of textiles is of major importance.

The merchant, particularly, and all those engaged in the purchase and/or sale of goods must be thoroughly familiar with the merchandise they are handling if they wish to be successful. Only thorough knowledge will prevent the mistakes that are too often made in buying and selling.

#### ***Reasons for Studying Textiles***

A study of textiles will show, for example, why certain fabrics are more durable and therefore more serviceable for specific purposes. It will explain why certain fabrics make cool wearing apparel as well as give an impression of coolness when used as decoration. The

matter of cleanliness and maintenance must also be estimated before purchasing, when that is an important factor.

Complete knowledge of textiles will make it easy to develop the ability to distinguish quality in fabrics and, in turn, to appreciate the proper uses for the different qualities. As a result, both the consumer merchant and consumer customer will know how to buy and what to buy and sales people will know how to render good service to those consumers who have not had the advantage of a formal course in textiles.

Great strides have been made in the textile industry, and have markedly influenced our general economic growth. The prosperity and growth of related industries, retail apparel stores, have produced broader employment opportunities. Competition has fostered the creation of new textile fibers with specific qualities to compete with well-established fibers. New fiber blends have been created to combine many of these qualities into new types of yarns with new trademarks. There are also new names for the fabrics made of these new fibers and yarns. New finishes have been developed to add new and interesting characteristics to fibers, yarns, and fabric.

There is a challenge to the consumer, who is sometimes knowledgeable but frequently confused, he is not technical, this knowledge being imparted in this book can be easily understood and consequently very useful to the students who will be in business and also help in personal life. All of this information can be of useful benefit for economy, durability, serviceability, and comfort, as well as for such aesthetic values as hand or feel, texture, design, and color.

In the study of textiles, the students' initial interest will be when they discover the natural fascination of fabrics and their cultural associations, particularly when

factual study is supplemented by actual handling of the textile materials. The subject will seem worthwhile as they become familiar with illustrative specimens and fabrics and begin to handle and learn to compare the raw materials of which fabrics are made as well as the finished consumers' goods.

The textiles are very complex. At this point, an introduction is being given compared to this vast subject, so as to provide a brief overview for some insight.

It begins in agriculture with fiber production of cotton, flax, and other fibrous plants; in husbandry of sheep, other animals, and silkworms; in mining of metals and minerals; in forestry for wood; in chemical research and production of synthetics. These fibers are processed into yarns or fabrics. The yarns are made into fabrics for industrial and consumer uses by various means, such as weaving and knitting. The fabrics are converted into finished cloths, which provide particular appearances and performances. These fabrics are made into end-use products, including apparel, home furnishings, and various industrial applications. These products are then merchandised and sold. Every one of these aspects of the textile industry is a field in itself, and there is interdependency with multiplying effects on other industries.

As one learns about the various aspects of the production of textiles and textile products, it becomes apparent that these activities play a major role in the economy. The industry has so many facets that it is possible that the student's interests may develop in the pursuit of a career in one of them. For example, consumers require the services of teachers of textiles, fashion designers textile designers and interior decoration. The fields provide stimulating career opportunities in themselves. The retailer who serves them requires

salespeople, buyers, merchandise managers, and related personnel who deal with textile products. The manufacturers of these products need fabric buyers, designers, production managers, salespersons, etc. The fabric manufacturers, yarn producers, and fabric finishers need knowledgeable people. The chemical industry requires skilled personnel in a variety of areas. All of these fields utilize marketing and advertising specialists to promote textiles and textile-related products.

# How fabric is made

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# Production Rate

| Fabric production method | Rate of fabric production |
|--------------------------|---------------------------|
| Weaving                  | 1 m/min                   |
| Knitting                 | 2 m/min                   |
| Nonwoven                 | 100 m/min                 |

# Introduction

- Fabrics can be made from fibres as well as from yarns.
- Conventional fabric production:
  - Fibre → Yarn → Fabric (knitting or weaving)
- Non-woven production
  - Fibre → Fabric
- It eliminates the yarn production process and makes the fabric directly from fibres.



## Web formation

- A nonwoven fabric is basically a web of fibres held together in some way.
- The web may be made of staple fibres or filaments, or from portions of polymer film.



## C) Fabric type

1. Knitted fabrics tend to pill more readily than woven fabrics.
2. Since knitted constructions are composed of a series of loops, a greater amount of yarn surface is exposed, making them more susceptible to abrasion in wear.
3. Moreover, knitted fabrics are more often constructed of low-twist yarns made of staple fibres to give a soft, bulky feel and appearance.
4. Again, the staple fibres have a greater chance of working their way to the surface of fabric to form pilling.
5. Dry relaxed knitted fabrics made from yarns with a higher proportion of acrylic fibres exhibit a greater pilling tendency. The incidence of pilling considerably reduces with an increase in twist and the tightness factor after full-relaxation treatments.



# First introduction to fabrics

Knowledge Class · Fourth Issue

## Definition of textile fiber

Usually, the diameter is from a few microns to tens of microns or slightly thicker. Objects whose length is many times (thousands of times, or even more) more significant than their diameter are generally called fibers.



## Fiber → Yarn → Fabric

1. All fabric is made from fiber, either natural or synthetic.
2. The fiber is processed and twisted into yarn.
3. The yarn is then woven or knit into fabric.



