

**Bergen Community College**  
Division of Humanities  
Department of Visual and Performing Arts  
Course Syllabus

**FAB 102**  
**Textile Science and Construction**

**Basic Information About Course and Instructor:**

**Semester and Year:**

**Section Number:**

**Meeting Times:**

**Location:**

**Instructor:**

**Office Location:**

**Phone:**

**Departmental Secretary:** Pam Coles

**Office Hours:**

**Email Address:**

**Course Description:**

This course is an introduction to textile science, including natural and synthetic fiber sourcing, and the variety of construction techniques. Emphasis is placed on identifying and evaluating fiber and fabric construction characteristics, correct use of terminology, and determining appropriate uses in the design and construction of garments.

**Credits:** 3 (3 lecture)

**Pre-requisites:** FAB-101

**Co-requisites:** None

**Student Learning Outcomes:**

After successfully completing all course activities, students will be able to:

1. Recognize and understand differences between a variety of natural and synthetic fibers.
  - o **Means of Assessment:** Assignments, Tests, Final Project & Presentation
2. Describe the processes of yarn development.
  - o **Means of Assessment:** Assignments, Tests
3. Recognize and understand differences between various textile construction methods, including woven, knitted, and non-woven techniques.
  - o **Means of Assessment:** Assignments, Tests, Final Project

4. Utilize appropriate textile terminologies and understand definitions related to each.
  - o **Means of Assessment:** Tests, Class Participation
5. Recognize a variety of textile finishes and understand basic dyeing and printing techniques.
  - o **Means of Assessment:** Lab Assignments, Quizzes
6. Outline the variety of smart and responsive textiles currently available in the industry.
  - o **Means of Assessment:** Research Project, Textile Current Events
  - o

### **Course Content:**

The course will cover the following topics:

**UNIT 1:** Students will learn the basics of fiber properties, textile types and production, including mills.

**UNIT 2:** Students will learn about natural and organic fibers from growth through spinning, weaving/knitting and finishing, in addition to usage and marketing.

**UNIT 3:** Students will learn about synthetic fibers, how they are made and from what source through spinning, weaving/knitting and finishing and including usage and marketing. Special emphasis is placed on new developments in high-tech fabrics.

**UNIT 4:** Students will learn about spun and filament yarns, yarn twist, carded and combed cotton, worsted and woolen, and single and ply yarns.

**UNIT 5:** Students will learn the differences between woven and non-woven fabrics, focusing on the process and qualities, as well as their appropriate use in design.

**UNIT 6:** Students will learn about knits, crochets and other knotting techniques, the process and qualities, as well as their appropriate use in design.

**UNIT 7:** Students will learn about textile finishing, their functionality and aesthetic qualities.

In addition, they will study dyeing and print techniques, as well as learn the basics of textile testing and care.

**UNIT 8:** Students will learn the basics of sourcing fibers, textiles and other design materials, with a focus on global supply chain issues related to politics, sustainability and environmental impact.

### **Course Texts and Study Materials:**

#### **Required Textbook:**

- Johnson, Ingrid, Cohen, C. Allen, Sarkar, Ajoy K. J.J. Pizzuto's Fabric Science (12th ed.). New York: Fairchild, 2023. ISBN: 978-1-5013-9570-3

#### **Student Supplies:**

- Swatch Kit for J.J. Pizzuto's Fabric Science (12th ed.). New York: Fairchild Books, 2023. ISBN: 9781628926576
- Pick glass, double-sided tape, notebook, and paper scissors

#### **Suggested Resources:**

- Various academic and industry publications as outlined by the individual instructor in Canvas.

### **Research, Writing, and Examination Requirements:**

Students will be assessed through a variety of methods, including:

- Assignments (Experimental Fabric Manipulation, Lab Swatch Book, Textile Current Events)
- Tests (Midterm and Final Exam)
- Final Project & Presentation (Textile Technology & Sustainability Research)
- Quizzes and class participation

#### **Grading Policy:**

- Tests (Midterm and Final Exam) – 20%
- Mini Assignments – 10%
- Lab Assignments – 20%
- Final Project – 20%

- Textile Current Events – 10%
- Quizzes – 20%

### **Grading Scale:**

- A: 90-100%
- B+: 85-89%
- B: 80-84%
- C+: 75-79%
- C: 70-74%
- D: 60-69%
- F: 0-59%

### **Attendance Policy:**

#### **BCC Attendance Policy:**

All students are expected to attend punctually every scheduled meeting of each course. Attendance and lateness policies and sanctions are determined by the instructor and will be outlined in the course syllabus.

#### **FAB Attendance Policy:**

Class participation and in-class work are key to succeeding in fashion apparel design. Three or more absences will result in a full letter grade drop. Six or more absences will result in an automatic failing grade.

### **Other College, Divisional, and/or Departmental Policy Statements:**

Statement on plagiarism and/or academic dishonesty:

[Academic Matters - Bergen Community College - Acalog ACMS™](#)

Statement on the appropriate use of AI (see the following link for guidance):

[AI-Guidance-Resource-Page.pdf \(bergen.edu\)](#)

ADA statement:

[Disability Services \(Office of Specialized Services\) | Bergen Community College](#)

Sexual Harassment statement:

[HR-003-001.2018-Policy-Prohibiting-Sexual-Harassment.pdf \(bergen.edu\)](#)

Statement on acceptable use of BCC technology:

[Acceptable-Use-Policy.pdf \(bergen.edu\)](#)

Recommended Syllabus Statements from the Office of Specialized Services:

[Syllabus Statements | Bergen Community College](#)

Statement on the purpose and value of faculty office hours.

### **Accessibility Statement**

Bergen Community College is committed to ensuring the full participation of all students in its programs. If you have a documented disability (or think you may have a disability) and, as a result, need a reasonable accommodation to participate in this class, complete course requirements, or benefit from the College's programs or services, contact the Office of Special Services (OSS) as soon as possible at 201-612-5270 or [www.bergen.edu/oss](http://www.bergen.edu/oss). To receive any academic accommodation, you must be appropriately registered with OSS. The OSS works with students confidentially and does not disclose any disability-related information without their permission. The OSS serves as a clearinghouse on disability issues and works in partnership with faculty and all other student service offices.

### **Student Support Services**

Bergen Community College provides exemplary support to its students and offers a broad variety of opportunities and services. A comprehensive array of student support services including advising, tutoring, academic coaching, and more are available online at <https://bergen.edu/currentstudents/>.



## Sidney Silverman Library Online Resources:

[Guides BY SUBJECT - LibGuides at Bergen Community College](#)

General Search and Databases: [Library | Bergen Community College](#)

### Course Outline and Calendar:

Week	Topic	Assignments/Activities
1	Introduction to Textile Science	Read Chapters 1-2, Quiz 1, Assemble Swatch Kit
2	Natural & Manufactured Fibers	Read Chapter 3, Lab 1, Quiz 2
3	Yarns and Sewing Threads	Read Chapter 4, Lab 2, Quiz 3
4	Determining Fabric Quality	Read Chapter 14, Midterm Review, Quiz 4
5	Midterm Exam	Midterm Exam, Mini Assignments 1 & 2 Due
6	Woven Fabrics	Read Chapter 5, Lab 5, Quiz 6
7	Knitted Fabrics	Read Chapter 6, Lab 6, Quiz 7
8	Other Types of Textiles	Read Chapter 7, Quiz 8
9	Guide to Fabric Selection	Read Chapter 16, Lab 7, Quiz 9
10	Textile Dyeing	Read Chapter 8, Textile Current Event 3 Due
11	Textile Printing	Read Chapter 9, Lab 9, Quiz 10
12	Textiles and the Environment	Read Chapter 15, Quiz 11
13	Textile Finishing	Read Chapter 10, Lab 10, Quiz 12
14	Care & Renovation of Textiles	Read Chapter 11, Final Paper Due
15	Final Exam	Final Exam

**Note to Students:** This Course Outline and Calendar is tentative and subject to change based on the progress of the class.

