

Sewing Construction and Textiles 3

Exam Information	Description
Exam number 354 Items 37 National Career Cluster Arts, Entertainment, & Design Certification available Yes	The Sewing Construction and Textiles 3 industry certification exam assesses learners' abilities in apparel or interior design opportunities using soft goods/textiles and construction/production skills. It evaluates experiences in pattern design, apparel design and construction, fitting and alteration, and interior design projects. Learners demonstrate their understanding of entrepreneurial opportunities and careers in design fields. The exam may also include elements of student leadership and competitive events (FCCLA).

Exam Blueprint and Performance Skills

Standard	Percentage of exam score
1. Careers	13%
2. Technology	15%
3. Fabrics	44%
4. Entrepreneurial Options	29%

*Includes performance skill evaluation

Standard 1 - Careers (13% of exam score)

Candidates will analyze careers and explore the design industry.

Objective 1 Research employment and entrepreneurial opportunities and preparation for interior and/or fashion design careers.

1. Interior Design Careers:

- a. Interior designer: make interior spaces functional, safe, and beautiful by determining space requirements and selecting decorative items, such as colors, lighting, and materials.
- b. Developer: plan, create, and present products for a specific market using knowledge of principles and elements of design, aesthetics, and technical skills. Work closely with design and technical teams.
- c. Graphic Designer: create visual concepts, by hand or using computer software, to communicate ideas that inspire, inform, or captivate consumers. They develop the overall layout and production design for advertisements, brochures, magazines, and corporate reports.
- d. Art Directors: responsible for visual style and images in magazines, newspapers, product packaging, and movie and television productions. They create the overall design of a project and direct others who developed artwork and layouts.
- e. Merchandise displayers/Window trimmers: creates fixtures and display stands for events such as large public exhibitions, conferences, trade shows and temporary displays for business, museums, libraries, and galleries.
- f. Fabricator: assemble finished products and parts that go into them. They use tools, machines, and their hands.
- g. Entrepreneur: devise strategies and policies to ensure that an organization meets its goals. They plan, direct, and coordinate operational activities of companies and organizations.
- h. Purchasing/Buyers: sources goods to be sold at retail stores or presented in showrooms. (e.g., flooring, upholstery, accessories)

2. Fashion Design Careers:

- a. Fashion Designer: create original clothing, accessories, and footwear. They sketch designs, select fabrics and patterns, and give instructions on how to make the products they designed.
- b. Developer: plan, create, and present products for a specific market using knowledge of principles and elements of design, aesthetics, and technical skills. Work closely with design and technical teams.
- c. Purchasing/Buyers: sources goods to be sold at retail stores. (e.g. - clothing, accessories footwear, fabrics, notions)
- d. Retail Sales: assist the customer in brick and mortar store to facilitate their purchase.
- e. Costume Designer: a person who designs costumes for film, stage production, or

television.

- f. Entrepreneur: devise strategies and policies to ensure that an organization meets its goals. They plan, direct, and coordinate operational activities of companies and organizations.

Objective 2 Identify knowledge and skills for selected careers in the interior and fashion design industries.

1. Employability/Soft Skills
 - a. Organization
 - b. Collaboration/teamwork
 - c. Effective communication
 - d. Values
 - e. Self-representation (e.g. - appropriate language and dress, reliability, etc.)
 - f. Critical thinking
2. Technical Skills
 - a. Renderings (hand and digital)
 - b. Reflection/Evaluation
 - c. Client Services (assessing client needs and wants)
 - d. Presentation (visual and oral)

Standard 2 - Technology (15%)

Candidates will identify technology used in fashion design/interior design fabrication.

Objective 1 Explore with basic design software.

1. Identify how CAD (*Computer Aided Design*) and Vector are used in the fashion and commercial design industry.
 - a. CAD: a program you use to create 2-D and 3-D shapes.
 - b. Vector: a graphic that can be scaled and layered in a drawing program.
 - c. CAD and vector programs may be used together to create a complete design.
2. Understand what output files, outsourcing and pattern grading terms are in relationship to design software.
 - a. Output files: type of file that a digital document can be saved as.
 - b. Outsourcing: ability to share a file.
 - c. Pattern Grading: procedure for creating different sizes from a pattern
without new measurements. (block/sloper)
3. Compare commercial and personal use design software programs used in the fashion and commercial design industry.
 - a. Commercial Design software: the license allows the user to design and sell the product. These programs cost more than personal design programs. Examples are: Adobe Illustrator, Browzwear, Fashion CAD, Gerber Accumark, Gemini Pattern Editor.

- b. Personal Design software: this product can only be used for personal use, not for resale. Examples are Adobe Illustrator, Design Sew, and Wild Ginger.

Optional: Standard performance evaluations on the final page of this document

Standard 3 - Fabrics (44%)

Candidates will identify and choose appropriate fabrics based on fiber properties as it relates to an end product. (To be integrated throughout the course in various projects)

Objective 1 Review and identify characteristics of natural fibers. Consider these fibers in interior and apparel applications

1. Cotton: plant source - absorbent, comfortable, durable, wrinkles, shrinks, easy to launder.
2. Linen: (flax) plant source - absorbent, natural luster, quick drying, wrinkles, frays, little stretch.
3. Silk: (silkworm cocoon) animal source - absorbent, natural luster, insulating, strong, resilient, dyes well, expensive, degrades and yellows from age and sunlight.
4. Wool: (fur) animal source - absorbent, strong, elastic, fire retardant, shrinks when laundered improperly, wrinkle resistant, warm.

Objective 2 Review and identify characteristics of manufactured fibers. Consider these fibers in interior and apparel applications..

1. Nylon: synthetic - strong, elastic, water repellent, colorfast, frays easily.
2. Polyester: synthetic - good shape retention, easy to launder, wrinkle resistant, colorfast, blends well with other fibers, retains oily stains.
3. Acrylic: synthetic - resembles and is generally less expensive than wool, soft, warm, nonabsorbent, pills, heat sensitive, can shrink or stretch.
4. Lyocell: cellulosic - soft and comfortable, drapes beautifully, blends well with other fibers, wrinkles, dyes well, antibacterial.
5. Spandex: synthetic - very elastic, adds stretch when blended with other fibers, requires stretch stitching techniques, shrinks.
6. Olefin: synthetic - resists: abrasion, chemicals, stains, mildew, pilling, wrinkles, static. Excellent wicking and thermal warmth, poor dye ability.

Objective 3 Review and identify various types of fabric finishes. Consider these fibers in interior and apparel applications.

1. Fabric Finish: improves appearance, hand (feel) and/or performance of textiles.
2. Stain resistant: makes fibers less absorbent, so it is easier to lift off or sponge away spills of food, water, and other substances.
3. Fire resistant: prevents fabric from supporting or spreading a flame.
4. Wrinkle resistant: helps fabric retain its original shape and resist wrinkling.
5. Waterproof: fills the pores of a fabric, so water cannot pass through it.
6. Water resistant: able to resist the penetration of water to some degree but not entirely.

Objective 4 Explore and identify performance textile technologies.

1. Antimicrobial: a chemical is added to the solution before being extruded, which kills and inhibits the growth of microorganisms, such as bacteria viruses and fungi.
2. Wicking: changing the cross-section of the fiber as it is extruded to mimic natural fiber properties, which draws moisture away from the body.

Objective 5 Examine the progression of ethical practices in the textile and apparel industry.

1. Explore and identify environmental sustainability practices in the textile and apparel industry.
 - a. Ethics: moral principles that govern a person's or group's behavior.
 - b. Sustainable product: meets the needs of the present while making sure future needs are met. Provides environmental, social, and economic benefits while protecting the health of the public and the planet.
 - c. Environmental Responsibility: The obligation that a company must operate in a way that protects the environment.
2. Human ethical impact of fibers used in the industry.
 - a. Fair Trade: a movement whose goal is to help producers in developing countries to get a fair price for their products. Fair trade helps to provide safe working conditions and improved livelihoods for workers around the world.
 - i. USA Fair Trade Organization
 - ii. World Fair Trade Organization
 - iii. Rainforest Alliance

Optional: Standard performance evaluations on the final page of this document

Standard 4 - Entrepreneurial Options (29%)

Candidates will explore entrepreneurial options in the fashion and interior design industry.

Objective 1 Candidates will explore the sequence of steps in establishing a business plan.

1. Introduction
 - a. Description of the business and its goals.
 - i. Market research to determine demand for product.
 - b. Ownership of the business and its legal structure.
 - c. List the skills and experience you bring to the business.
 - d. Advantages you and your business have over competitors.
2. Marketing
 - a. Promote products and services your company will offer.
 - b. Customer demand for your products and services.
 - c. Identify your market, its size and locations.
 - d. Explain how your products and services will be advertised and marketed.
 - e. Pricing strategy.

3. Finance & Management
 - a. Expected return on investment and monthly cash flow for the first year.
 - b. Projected income statements.
 - c. Discuss your break-even point.
4. Operations
 - a. Day-to-day operations.
 - b. Hiring and personnel procedures.
 - c. Insurance, lease or rent agreements.
 - d. Equipment necessary to produce your goods or services.
 - e. Production and delivery of products and services.
5. Concluding statement
 - a. Summarize your business goals and objectives and express your commitment to the success of your business. Once you have completed your business plan, review it with a friend or business associate and professional business counselor.
 - b. Remember, the business plan is a flexible document that should change as your business grows.

Objective 2 Analyze how to determine production cost and MSRP (Manufacturer Suggested Retail Price) of a product.

1. Production Costs
 - a. Material Costs: the amount of money you spend on raw materials needed to create a product.
 - b. Labor Costs: the number of hours required to make your product and the hourly rate associated with those hours.
 - c. Overhead Costs: any further expenses required for the operation of your business. (equipment, utilities, rent, insurance, taxes)
2. MSRP (includes production costs and the following)
 - a. Profit Margin: The amount by which revenue from a sale exceeds cost in a business.
 - b. Marketing Costs: Promotion, distribution, and storage costs associated with goods or services.

Objective 3 Candidates will be able to explain the basics of the 4P's of marketing.

1. Product: any goods, services, or ideas that we wish to sell.
2. Place: distribution is getting the right product to the right place at the right time in the right amount and in the right condition.
3. Price: determining a dollar amount at which we can sell the product.
4. Promotion: making potential customers aware of a product in a positive way so they will want to buy it.

Objective 4 Understand the basics for using credit for business financing.

1. Interest rate: the proportion of a loan that is charged as interest to the borrower, typically expressed as an annual percentage of the loan outstanding.

2. Personal guarantee: individual agrees to be responsible for the financial obligations of a debtor or borrower to a lender, if the debtor or borrower fails to pay an amount owing under the loan agreement.
3. Loan term: monetary loan that is repaid in regular payments over a set period of time. Term loans usually last between one and ten years but may last as long as 30 years in some cases. A term loan usually involves an unfixed interest rate that will add additional balance to be repaid.
4. Ability to repay: an economic principle stating that the amount of tax an individual pays should be dependent on the level of burden the tax will create relative to the wealth of the individual.

Optional: Standard performance evaluations on the final page of this document

Workplace Skills

Candidates will develop professional and interpersonal skills needed for success in the fashion industry.

Objective 1 Determine the difference between hard skills and soft skills.

1. Hard Skills: Hard skills are specific, teachable abilities that can be defined and measured.
2. Soft Skills: Personal attributes that enable someone to interact effectively and harmoniously with other people.

Objective 2 Identify soft skills needed in the workplace.

1. Professionalism
2. Respect Legal requirements/expectations
3. Good communication skills
4. Resourcefulness & creativity
5. Work Ethic

Optional: Standard performance evaluations on the final page of this document

Performance Skills Evaluation

Exam name: Sewing Construction and Textiles 3

Candidate Name: _____

Performance assessments may be completed and evaluated any time before the certification is issued. The following performance skills can be used in connection with the associated standards and exam. The evaluator will function as the subject matter expert to determine if the candidate meets the skills requirements with a Yes/No for passing.

Standard 2 – Technology Explore and analyze a current design software app related to the textile design industry in fashion and/or interior design.	Pass:
Standard 3 – Fabrics Analyze the effects of textile characteristics on design, construction, care, use, and maintenance of products created in class.	Pass:
Standard 4 – Entrepreneurial Options - Create a Textile Design Entrepreneurship portfolio containing a written small business plan. (May consult the FCCLA Entrepreneurship STAR Event as the project model for the entrepreneurship portfolio.) - Create a marketable Fashion Design or Interior Design product.	Pass:
Workplace Skills - Determine the difference between hard skills and soft skills. - Identify soft skills needed in the workplace.	Pass:

Evaluator Name: _____

Date: _____