

Secondary Education Curriculum, 2078

Sewing and Knitting

Grade: 11 and 12

Subject code: Sek. 315 (Grade 11)

Sek. 316 (Grade 12)

Credit Hours: 5

Annual working hours: 160

1. Introduction

Clothes or clothing are the basic needs of an individual. Type of clothing worn depends on gender, body type, social, and geographic considerations. Furthermore, clothing performs a range of social and cultural functions, such as individual, occupational and gender differentiation, and social status. Clothing may also function as adornment and an expression of personal taste or style. This curriculum aims to develop an intense understanding of different aspects of sewing and knitting.

This curriculum comprises of the contents like: textile fibers, yarn spinning, weaving and knitting, fabric selection, body measurement, pattern making and sewing, laboratory rules, basic terminologies and stitches, making samples and garment construction, fabric finishing, elements of fashion, dyeing and printing, the color wheel and stain removal in fabrics, basic sketching and making garment, knitting terminologies and knitting wear and uses of local resources and fancy dress construction.

The curriculum prepared in accordance with National Curriculum Framework is structured in such a way that it incorporates the level-wise competencies, grade-wise leaning outcomes, scope and sequence of contents, suggested practical/project activities, learning facilitation process and assessment strategies so as to enhance the learning on the subject systematically.

2. Level-wise Competencies

On completion of Grade 12, the students will develop the following competencies:

1. Describe the types and properties of textile fibers.
2. Explain the classification and texture of yarn, its amount and direction of twist.
3. Explain the structure of loom; identify the basic weaves and types of knitting.
4. Select and use of the right fabric according to figure types, activities, color, design and texture.
5. Explain the standard measurement, body measurement and flat garment measurement.
6. Conceptualize the laboratory rules, basic terminologies and stitches and apply them.
7. Make samples of garments and construct garments and fancy dress.

3. Grade-wise Learning Outcomes

Grade 11		Grade 12	
Content Area	Learning Outcomes	Content Area	Learning Outcomes
1. Textile Fibers	1.1. Explain the classification and properties of textile fibers. 1.2. Describe the properties of	1. Fabric Finishing	1.1. Explain about fabric finishing and its advantages. 1.2. Describe the types of fabric finishing.

	<p>cotton, flax, hemp and jute.</p> <p>1.3. Explain the properties of silk and wool fibers.</p> <p>1.4. Describe the properties of viscose rayon, and acetate.</p> <p>1.5. Explain the properties of polyester, nylon and acrylic.</p>		
2. Yarn Spinning	<p>2.1. Explain the classification of spinning.</p> <p>2.2. Explain about the classification of yarns: Mono filament and multi filament yarns.</p> <p>2.3. Describe yarn twist, amount of twist and direction of twist.</p> <p>2.4. Introduce the textured of yarns: core spun yarn; novelty and fancy yarns, blended yarns, and sewing threads.</p>	2. Elements of Fashion	<p>2.1. Introduce fashion and explain the fashion cycle.</p> <p>2.2. Explain the factors that influence on fashion - Social, cultural, economic, and political, education, technological etc.</p> <p>2.3. Classify the apparel according to garment types.</p>
3. Weaving and Knitting	<p>3.1. Describe the structure of loom and The loom, types of looms (Non-automatic loom, automatic loom) and selvedge formations.</p> <p>3.2. Explain about weaving.</p> <p>3.3. Identify the basic weaves: plain, basket, rib, twill, satin, sateen, jacquard, crepe, pique, leno and velvet.</p> <p>3.4. Describe types of knitting: hand knitting and machine knitting.</p>	3. Dyeing and Printing	<p>3.1. Explain the process of dyeing.</p> <p>3.2. Apply different types of dyeing in fabrics.</p> <p>3.3. Describe about printing and its types.</p> <p>3.4. Demonstrate household level printing in fabrics.</p>
4. Fabric Selection	<p>4.1. Demonstrate the skills of selecting the right fabric according to figure types: tall, short, fat, and thin.</p> <p>4.2. Explain the importance of the selection of clothing for various activities: school/campus, sport, party, office, and casual.</p> <p>4.3. Explain the selection of color, design and texture of</p>	The Color Wheel and Stain Removal in Fabrics	<p>4.1. Demonstrate the color wheel and explain the types of colors.</p> <p>4.2. Explain the three color schemes (Prepare a file).</p> <p>4.3. Describe the points need to consider while removing stain in fabrics.</p>

	fabrics according to season, occasion, time, fashion and age.		
5. Body Measurement, Pattern Making and Sewing	<p>5.1. Practise the skill of the standard measurement and body measurement.</p> <p>5.2. Demonstrate to measure of different parts of the body.</p> <p>5.3. Explain about pattern and its types: accurate pattern and model pattern.</p> <p>5.4. Develop pattern for basic bodice block.</p> <p>5.4. Apply proper steps on sewing clothes.</p>	5. Basic Sketching and Making Garment	<p>5.1. Sketch human figures (both male and female) (prepare a file).</p> <p>5.2. Describe the steps of making garment.</p>
6. Laboratory Rules, Basic Terminologies and Stitches	<p>6.1. Explain the importance of laboratory rules and guidelines.</p> <p>6.2. Introduce the basic terminologies: centre front, centre back, grain line, notches, button hole, front, back, waist line, arm hole, side seam, neck line, shoulder, across back, two way grain line, one way grain line and seam allowances.</p> <p>6.3. Apply the basic stitches: running, hemming, back, half back, tacking, over-casting, herringbone and buttonhole stitches while making garment.</p> <p>6.4. Apply the decorative stitches: stem, double knot, chain, cross, open chain, fly, feather, French knot, and spider wave stitches in garment.</p>	6. Knitting Terminologies and Knitting Wear	<p>6.1. Define knitting and basic knitting terminologies.</p> <p>6.2. Explain the types of knitting -Weft knitting and warp knitting.</p> <p>6.3. Describe and implement stitches generally used in knitwear.</p> <p>6.4. Explain the basic terminologies used in knitting – Course, wales, loop, cast on, bind off (cast off), alternate, decrease, increase, Selvage, Slip,</p> <p>6.6. Produce hand knitting wear – (socks, macramé plant hanger, simple scarf or fingerless mitts – any one).</p> <p>6.5. Familiar with the part and function of knitting machine (If available).</p>
7. Making Samples and Garment Construction	<p>7.1 Explain the uses of different samples in garments.</p> <p>7.2. Implement of samples: placket opening, facing, pleats and darts in garments.</p>	7. Uses of Local Resources and Fancy Dress	<p>7.1 Explain how to use local resources to make accessories and fancy dress construction.</p> <p>7.2 Explain the importance of locally available resources for making handicrafts.</p>

	7.3. Construct the garments (Blouse and Gent's Shirt).	Construct ion	7.2. Transform resources into products – prepare at least 2 handicrafts (products) by local resources (Uses of resources for economic value). 7.3. Construct the fancy dress (Adopt current fashion) with perfection in selecting the right fabrics, right pattern, and the right technique.
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4. Elaboration of Contents

Grade 11				Grade 12		
S.N .	Content Area	Elaboration of Contents	Hrs.	Content Area	Elaboration of Contents	Hrs.
1	Textile Fibers	1. Textile Fibers: 1.1. Introduction and classification of textile fibers according to origin. 1.2. Essential and desirable properties of textile fibers. 1.3. Definition of staple and filament fiber. 1.4. Cotton, flax, hemp, jute and their properties. 1.5. Silk, wool fibers and their properties. 1.6. Viscose rayon, acetate and their properties. 1.7. Polyester, nylon and acrylic and their properties.	15	1. Fabric Finishing	1. Fabric Finishing: 1.1. Introduction and advantages of fabric finishing - 1.2. Types of fabric finishing: 1.2.1. Chemical finishing – singeing, bleaching, shrinkage, mercerizing, creping, and mold and moth proof. 1.2.2. Mechanical finishing – calendaring. Embossing, napping, crabbing, sizing, weighting, moireing, and wash and wear. 1.2.3. Dyeing and printing	15
2	Yarn Spinning	2. Spinning of Yarns: 2.1. Definition and classification of spinning. 2.2. Classification of yarns: Mono filament and multi filament yarns. 2.3. Yarn twist, amount of twist and direction	10	2. Elements of Fashion	2. Elements of Fashion: 2.1. Introduction to fashion - fashion origin, fashion cycle and fashion terminology- blouses, jackets, skirts, trousers, and dresses. 2.2. Factors influence on fashion: - Social, cultural,	10

		<p>of twist.</p> <p>2.4. Textured of yarns: core spun yarn; novelty and fancy yarns, blended yarns, and sewing threads.</p>			<p>economic, political, education, technological etc.</p> <p>2.3. Classification of apparel:- according to garment type – sports, classic, bridal, and maternity.</p>	
3	Weaving and Knitting	<p>3. Weaving and Knitting:</p> <p>3.1. Introduction of loom and weaving.</p> <p>3.2. The loom, types of looms (Non-automatic loom, automatic loom) and selvedge formations.</p> <p>3.3. Introduction to basic weaves: plain, basket, rib, twill, satin, sateen, jacquard, crepe, pique, leno and velvet.</p> <p>3.4. Types of knitting: hand knitting and machine knitting.</p>	20	3. Dyeing and Printing	<p>3. Dyeing and Printing:</p> <p>3.1. Introduction of dyeing</p> <p>3.2. Types of dyeing- stock, yarn, piece, slab, and cross dyeing.</p> <p>3.3. Definition of printing - direct, discharge, resist printing</p> <p>3.4. Types of printing – screen, discharge, roller print and household level print (block and potato print).</p>	20
4	Fabric Selection	<p>4. Selection of Fabrics:</p> <p>4.1. Importance of fabric Selection.</p> <p>4.2. Fabric Selection according to figure types: tall, short, fat, and thin.</p> <p>4.3. Selection of clothing for various activities: school/campus, sport, party, office, casual.</p> <p>4.4. Selection of color, design and texture of fabrics according to season, occasion, time, fashion and age.</p>	15	4. The Color Wheel and Stain Removal in Fabrics	<p>4. The Color Wheel and Stain Removal in Fabrics:</p> <p>4.1. Introduction to the color wheel and types of colors - primary colors, secondary colors and tertiary (or intermediate) colors</p> <p>4.2. Three color schemes - complementary colors, triad colors and analogous colors</p> <p>4.3. Using the color wheel in wardrobe and mixing colors in an outfit.</p> <p>4.4. Points to be considered while removing stain in fabrics – types of fabrics, types of stain and techniques of stain</p>	20

					removal.	
5	Body Measurement, Pattern Making and Sewing	<p>5. Body Measurement, Pattern Making and Sewing:</p> <p>5.1. Measurement of different parts of the body.</p> <p>5.2. Introduction of pattern and its types: accurate pattern and model pattern.</p> <p>5.3. Pattern making: basic bodice block.</p> <p>5.4. Steps of sewing clothes – proper body measurement, accurate draft/pattern, select fabric on the basis of design, apply appropriate stitches, and use proper thread.</p>	20	5. Basic Sketching and Making Garment	<p>4. Basic Sketching and Making Garment:</p> <p>4.1. Introduction to sketching: Nine steps of sketching human figures (both male and female).</p> <p>4.2. Steps of making garment – Design process, idea development, design concept, final sketch of dress, pattern making, final pattern, cutting pattern, making toile, sewing the toile, the fitting, choosing the fabric, and making the final garment</p>	15
6	Laboratory Rules, Basic Terminologies and Stitches	<p>6. Laboratory Rules, Basic Terminologies and Stitches:</p> <p>6.1. Importance of laboratory rules and guidelines.</p> <p>6.2. Introduction of basic terminologies: centre front, centre back, grain line, notches, button hole, front, back, waist line, arm hole, side seam, neck line, shoulder, across back, two way grain line, one way grain line and seam allowances.</p> <p>6.3. Basic stitches: Running, hemming, back, half back, tacking, Over-casting, herringbone</p>	20	6. Knitting Terminologies and Knitting Wear	<p>6. Knitting Terminologies and Knitting Wear:</p> <p>6.1. Definition of knitting and basic knitting terminologies</p> <p>6.2. Types of knitting - Weft knitting and warp knitting.</p> <p>6.3. Stitches - Garter stitch, stockinette stitch, rib stitches, seed stitch, moss stitch, basket weave stitch, and purl ridge stitch.</p> <p>6.4. Basic Terminologies used in knitting – Course, wales, loop, cast on, bind off (cast off), alternate, decrease, increase, Selvage, Slip,</p> <p>6.5. Knitting terminologies: Alt.-alternate Beg.-beginning Cont.-continue Dec.-decrease</p>	20

		<p>and buttonhole stitches.</p> <p>6.4. Decorative stitches: stem, double knot, chain, cross, open chain, fly, feather, French knot, and spider wave stitches.</p>			<p>Foll.-following Folls.-follows G.St.-garterstitch Inc.-increase Incl.-inclusive K-knit m1-makeone P-purl Patt.-pattern Rep.-repeat Sl.-slip St.-stitch Tbl.-through the back of the loop Tog.-together yb-yarnback yfwd-yarnforward yf-yarnfront</p> <p>6.5. Hand knitting wears – (socks, macramé plant hanger, simple scarf or fingerless mitts – any one).</p> <p>6.6. Introduction and operation of knitting machine (If available).</p>	
7	Making Samples and Garment Construction	<p>7. Definition, Importance and Uses of different Samples in Garment:</p> <p>7.1. Samples: placket opening, facing, pleats and darts</p> <p>7.2. Construct the garments (Blouse and Gent's Shirt).</p>	20	Uses of Local Resources and Fancy Dress Construction	<p>7. Uses Local Resources for Making Accessories and Fancy Dress Construction:</p> <p>7.1. Importance of locally available resources – social, culture and economic aspects.</p> <p>7.2. Resources transform into products as accessories – prepare at least 2 accessories by local resources (Uses of resources for economic value).</p> <p>7.3. Construction of fancy dress (Adopt current fashion).</p>	20
		Total	120			120

5. Suggested Practical and Project Works

The practical work that students do during their course is aimed at providing them learning opportunities to accomplish competency of the curriculum as well as reinforcing their learning of the theoretical subject content. Similarly, involving in a project work fosters the self-learning of students in the both theoretical and practical contents. As this subject emphasizes to develop both theoretical and practical knowledge and skills, some of the practical and project works are suggested for the students. However, the tasks presented here are the samples only. A teacher can assign the extra practical and project works as per the students' need or specific context.

Grade 11			Grade 12		
Content Area	Suggested Practical and Project Works	Hrs.	Content Area	Suggested Practical and Project Works	Hrs.
1. Textile Fibers	1.1. Detect fibers and their properties using various methods-touching, tearing, burning and microscopic tests. 1.2. Draw the figure of fibers detection through a microscope and prepare a file.	3	1. Fabric Finishing	1.1. Visit any one of the textile industries to observe fabric finishing processes and prepare a report.	2
2. Yarn Spinning	2.1. Collect samples of yarns - yarn count measurement and yarn twist measurement. Then prepare a file.	2	2. Elements of Fashion	2.1. Work in groups and make a presentation on fashion terminology. 2.2. Conduct a small research on the influencing factors related to the fashion by using library, museum, websites and movies. Then prepare a report. 2.3. Conduct a market survey to study fashion trends in local markets, streets, and community and then make a presentation to the class.	5
3. Weaving and Knitting	3.1. Draw the diagrams of different parts of loom. 3.2. Collect samples of the mentioned basic weaves: Plain, basket, rib, twill, satin, sateen, jacquard, crepe, pique, leno and	4	3. Dyeing and Printing	3.1. Make samples by using different dyes in fabric. 3.2. Apply at least 2 types of printing method in clothes (Handkerchief and shawl/scarf).	5

	velvet (Prepare a file).				
4. Fabric Selection	4.1. Make a market survey and demonstrate the ways of selecting fabrics for various proposes.	2	4. The Color Wheel and Stain Removal in Fabrics	4.1. Draw designs of color wheels on A4 size paper (Prepare a file). 4.2. Demonstrate the process of removing stain in fabrics.	5
5. Body Measurement, Pattern Making and Sewing	5.1. Demonstrate the measurement of different parts of the body. 5.2. Draw the accurate pattern and model pattern. 5.3. Make a pattern of basic bodice block. 5.5. Demonstrate the steps of sewing clothes – proper body measurement, accurate draft/pattern, select fabric on the basis of design, apply appropriate stitches, and use proper thread.	5	5. Basic Sketching and Making garment	5.1. Draw Human figure and prepared a file. 5.2. Sketch at least 5 prospective sketches of different dresses as mentioned in the course in the whole year	7
6. Laboratory Rules, Basic Terminologies and Stitches	6.1. Demonstrate the rules and guidelines of laboratory. 6.2. Demonstrate the samples of basic terminologies: Centre Front - CF Centre Back - CB Grain line - $\updownarrow\leftrightarrow$ Notches - $\top\perp$ Π $<$ Buttons Button hole – Front - F Back – B Waist line - WL Arm hole - Ah Side Seam – SS Neck line - NI Shoulder – Sh Across back - AB Two way grain line - \updownarrow One way grain line - $\downarrow\uparrow$ Seam allowances 6.3. Make samples of basic stitches: Running, hemming, back, half back, tacking, Over-casting,	8	6. Knitting Terminologies and Knitting Wear	6.1. Produce at least 5 samples by using various knitting processes (Prepare a file). 6.2. Produce a knitwear product as mentioned in the course. 6.3. Visit knitting industry to be familiar with knitting machine and prepare a report.	6

	herringbone and buttonhole stitches (Prepare a file and also use these above mentioned stitches while making garments). 6.4. Make samples of decorative stitches: stem, double knot, chain, cross, open chain, fly, feather, French knot, and spider wave stitches (Prepare a file and also use these above mentioned stitches while making garments).				
7. Making Samples, Cutting, and Sewing Techniques of Garment	7.1. Apply different samples while making garments - Samples: placket opening, facing, pleats and darts 7.2. Make a draft, layout the developed draft, cut the fabric and make a dress. 7.4. Construct the garments (Blouse and Gent's Shirt)	16	7. Uses of Local Resources and Fancy Dress Construction	7.1. Collect at least 2 types of local recourses and make accessories (For example – felt fiber, wheat straw, bamboo straw use to make bag, decorative items etc.). 7.3. Construct a fancy dress (Adopt the current fashion).	10
	Total	40			40

6. Learning Facilitation Process

This course intends to provide both theoretical as well as practical knowledge and skills on the subject, thereby, blends with both theoretical and practical facilitation strategies to ensure better learning. In fulfilling the learning outcomes stated in the curriculum, the teacher should use a variety of methods and techniques that fit to the contents. In particular, the following methods, techniques and strategies are used for learning facilitation:

- Group Discussion
- Demonstration
- Case study
- Questionnaire
- Practical Works
- Project Works
- Problem Solving.
- Assignment and presentation

7. Student Evaluation

Evaluation is an integral part of learning process. Both formative and summative modes of evaluation are emphasized. Formative evaluation will be conducted so as to provide regular feedback for students, teachers and parents/guardians about how student learning is. Class tests, unit tests, oral question-answer, home assignment etc. are some ways of formative evaluation.

There will be separate evaluation of theoretical and practical learning. Summative evaluation embraces theoretical examination, practical examination and evaluation of research work or innovative work.

(a) Internal Evaluation

Internal evaluation is both formative and summative. For summative purpose it covers 25% of total weightage. Project work assessment is the internal assessment of reports and presentation of their project works either individually or group basis. In case of group presentation, every member of the group should submit a short reflection on the presented report in their own language. The criteria for internal evaluation are given in the table.

S.N.	Criteria	Percent
1	Classroom participation (Daily attendance, home assignment and classwork, participation in learning, participation in other activities)	3
2	Trimester exams (3 marks from each trimester exam)	6
3	Project work, project report and presentation	16
	Total	25

Note:

- (i) Practical examination will be conducted in the presence of internal and external supervisors. Evaluation of experiment will focus both the product of work and skills competencies of student in using apparatus.
- (ii) Project work assessment is the internal assessment of reports and presentation of their project works either individually or group basis. In case of group presentation, every member of the group should submit a short reflection on the presented report in their own language. Records of project works must be attested by external supervisor.

(b) External Evaluation

External evaluation of the students will be based on the written examination. It carries 75 percent of the total weightage. Questions for the external examination will be based on the specification grid developed by Curriculum Development Centre. Examination question paper will be developed using various levels of revised Bloom's taxonomy including remembering level, understanding level, application level and higher ability (analyzing, evaluating, and creating).