



Course 6: Fabric and Materials

Welcome to Course Six of the UKFT Production Sewing Machinist Course. This course provides an overview of fabric, materials and thread types used in the stitching industry. The content includes fabric properties and characteristics, thread types, how to handle different fabric types when sewing and how to identify and deal with fabric faults.

The course consists of four lessons:

- 6.1 Fabric Types
- 6.2 Fabric Handling
- 6.3 Fabric and Material Faults
- 6.4 Thread Types

The table below lists the learning outcomes and assessment criteria. The first column lists the learning outcomes. A learning outcome is the knowledge you will gain on course completion. The second column is the Assessment Criteria. Assessment Criteria is how you will demonstrate your learning by completion of the challenges within the course.

Learning Outcomes The learner will...	Assessment Criteria The learner can...
1. recognise fabric types and understand fabric properties and characteristics	1.1 know the origins and properties of natural fabrics, synthetics, and industrial fabrics 1.2 understand the characteristics of three fabric types
2. Know the handling techniques required when working with different fabrics	2.1 Understand fabric characteristics and behaviours 2.2 Know the correct fabric handling methods 2.3 Identify the consequences of incorrect fabric handling
3. Recognise fabric and material faults and know how to deal with them	3.1 Follow the correct fault checking procedure 3.2 Identify fabric and material faults before sewing 3.3 Deal with fabric and material faults appropriately 3.4 Know the consequence of unidentified fabric faults
4. Know the range of different thread types available and how they are applied	4.1 Identify types, finishes, qualities and characteristics of thread 4.2 Describe the thread numbering system

	<p>4.3 Select the correct thread type for different materials</p> <p>4.3 Identify the consequence of using poor quality or incorrect threads</p>
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ESTIMATED LEARNING TIME 30 HOURS



About Your online workbook

1. Unit Introduction: A brief introduction that explains the subject covered and how it relates to your job. (In text and video format). The introduction includes the overall aims of the unit and will tell you what you will know and be able to do when finished.

2. Key words: A set of key words and their meanings is provided at the beginning of the unit. These words are essential to your understanding of the subject area.

3. Subject: The bulk of the workbook is made up of technical information. The information is broken down into sections, each section contains, text, images and in some cases, videos.

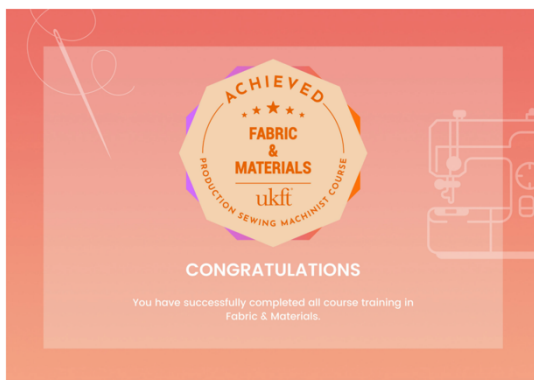
4. Knowledge and Skills Challenges: These are short self-assessments designed to help you with your learning. They are scattered across the unit to encourage bite size learning. These challenges need to be completed correctly to be awarded your UKFT digital badge and can be repeated as required.

5. Groundwork: These are recommended optional activities. Completing them will help you to better understand your role, your company, and internal processes and procedures. We recommend you create a folder to record and keep your groundwork activities in, this will provide you with a reference tool that will help inform your learning and job role responsibilities. Also, for those undertaking an apprenticeship these activities will help you gather information relevant to the End Point Assessment. Alternative groundwork activities suitable for independent learners, are also included.

Here are some words, and their meanings that you will across within this unit. They are specific to the subject area, and you may not have heard them before.

Word	Meaning
Materials	In the context of this unit this means trimming and applications i.e. zips, buttons, labels etc
Natural Fabrics	Fabrics made of organic materials such as animal coats, the cocoons of silkworms, plants seeds, leaves and stems.
Synthetics	Fabric made from either non-organic materials or organic materials combined with chemicals
Industrial fabrics	Fabric used in the technical textiles industry usually made from synthetic man-made fibres like fiberglass and carbon.
Aramid Fibres	A class of heat-resistant and strong synthetic fibres. They are used in aerospace and military application
Woven	Textile formed by weaving, created on a loom, and made by interlacing two or more threads at right angles to one
Non-woven	Textile made by bonded together by fibres via chemical, mechanical, heat or solvent treatments
Textile Composites	A class of advanced materials, which are reinforced with textile preforms for structural or load bearing application
Geo Textiles	Permeable fabrics which, when used in association with soil, can separate, filter, reinforce, protect, or drain.
Bio Textiles	Textiles made wholly or partially from plants or vegetables

Performance Textiles	Textiles that provide additional functions such as repellence, resistance, or protection i.e., waterproof
Fabric Handling	The skills of a sewing machinist when handling and manoeuvring materials, stitching, and controlling the sew machine
Fabric properties	The characteristics of a specific fabric such as breathability, weight, drape, durability, softness,
Fabric construction	How the yarns/fibres are out together to form a fabric ie woven, knitted, bonded.
Fabric behaviour	How a fabric behaves when being sewn, i.e., stretchy, rigid, pliable, slippery or dense and difficult to manoeuvre
Polyfil threads	Cotton-wrapped polyester threads, widely used on most fabrics
Sewability	Term used to describe a sewing thread's performance
Denier	The physical actual weight of thread in grams, of 9,000 meters.



UKFT Certification

Completion of this course will earn you an industry approved UKFT Certificate. This award is recognised by the sector and validates your newfound skills.

Certification will help to secure employment in the fashion and textiles industry or if you are already employed, honours for the skills and knowledge you have gained which can now be utilised in your role or help advance your career in the industry.

The certificate is digital and can be downloaded on course completion.

When working as a Production Sewing Machinist, you will come across various fabrics and materials. The lessons in this course cover the most common used in the sewing industry. You may not experience working with them all, it depends on the type of product you make, but it is useful to be aware of the different types available.

The content covers fabric construction and characteristics, how to handle the different fabric types when sewing, how to identify and deal with faults, other materials you may work with (such as trimmings) and thread types. Watch the video below to find out more:



<https://vimeo.com/586196502/aef9100a7f>

